

*Prepared for:*

**California Integrated Waste Management Board**  
1001 "I" Street  
Sacramento, California 95812-4025

## **DRAFT REPORT**

# **Checklist of Pertinent Environmental Regulatory Requirements**

## **Landfill Facility Compliance Study**

*Prepared by:*



**GeoSyntec Consultants, Inc.**  
1500 Newell Avenue, Suite 800  
Walnut Creek, California 94596  
(925) 943-3034

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### **Disclaimer**

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# **1. Introduction**

This report presents the results of work completed under Task 1 of the Landfill Facility Compliance Study, California Integrated Waste Management Board (CIWMB) Contract number IWM-C9047. In accordance with the scope of work for this task, a checklist of environmental regulations pertinent to performance of municipal solid waste (MSW) landfills was developed.

The list of regulations identified in this task is presented in Section 2. Discussions of the federal regulations are presented in Section 3. Discussions of State of California requirements are presented in Section 4. Discussions of local requirements, including those of the regional air quality management districts, are presented in Section 5.

A summary of the federal regulations pertaining to landfills (except those related to air quality) is included in Appendix A. A summary of air quality regulations (including federal and California air districts) is included in Appendix B. A summary of the State of California regulations pertaining to landfills is included in Appendix C. A summary of city and county regulations pertaining to landfills is included in Appendix D.

## **2. List of Regulations**

### **2.1 Introduction**

Consistent with the scope of Task 1, GeoSyntec reviewed federal, State of California, and, where available, local environmental regulatory requirements pertaining to landfills. The following key regulations were identified at different levels. Summary discussions and conclusions from review and assessment of the regulatory requirements are presented in the remaining sections of the report.

### **2.1 Federal Regulations**

- Parts 257 and 258 (Solid Waste Disposal Facility Criteria) of Title 40 of the Code of Federal Regulations (CFR)
- Parts 136 and 445 of Title 40 (Effluent Limitations) of the CFR
- Subpart 60 GG (Standards of Performance for Stationary Gas Turbines) of Title 40 of the CFR
- Subpart 60 WWW (Standards of Performance for Municipal Solid Waste Landfills) of Title 40 of the CFR
- Part 51.165 (Review of New Sources and Modifications) of Title 40 of the CFR
- Part 52.21 (Prevention of Significant Deterioration) of Title 40 of the CFR
- Final Modification of the National Pollutant Discharge Elimination System (NPDES) Storm Water Multi-Sector General Permit for Industrial Activities (Federal Register, Part VII, 30 September 1998)

### **2.2 State of California Regulations**

- Title 27 (Environmental Protection) of the California Code of Regulations (CCR)
- Resolution Number 93-62 (Policy for Regulation of Discharges of Municipal Solid Waste) – State Water Resources Control Board (SWRCB)
- Order Number 97-03-DWQ (National Pollution Discharge Elimination System General Permit No. CAS 000001) – SWRCB
- Article 10, Chapter 1, Division 3 of Title 2 – California Environmental Quality Act (CEQA)

## **2.3 Local Regulations**

- Air Quality Regulations Related to MSW Landfills for 35 California Air Districts
- Available California County and City Codes, Ordinances and Regulations

### **3. Summary of Federal Requirements**

#### **3.1 Introduction**

The federal regulations related to solid waste disposal facilities are contained in different parts of Title 40 of the Code of Federal Regulations (CFR). In addition, there are separate regulations related to air quality and discharge of storm water that apply to landfills. The various federal regulations are discussed in the following sections. Summaries of the federal regulations pertaining to landfills are presented in Appendix A.

#### **3.2 Part 257 – Criteria for Classification of Solid Waste Disposal Facilities and Practices**

The regulations included in Part 257 of Title 40 of the CFR were promulgated on 9 October 1993 to ensure that non-municipal non-hazardous waste disposal facilities that receive conditionally exempt small-quantity generator waste do not present risks to human health and the environment. A table summarizing criteria for classification of solid waste disposal facilities (SWDF) and practices, including siting, groundwater monitoring, corrective action, and recordkeeping is presented in Appendix A.

Part 257 has the following subparts:

Subpart A—Classification of Solid Waste Disposal Facilities and Practices.

Subpart B—Disposal Standards for the Receipt of Conditionally Exempt Small Quantity Generator (CESQG) Wastes at Non-Municipal, Non-Hazardous Waste Disposal Units.

#### **3.3 Part 258 – Criteria for Municipal Solid Waste Landfills**

Federal regulations related to MSW landfill siting, construction, operations, closure, postclosure, groundwater monitoring and inspection of MSW landfills, are included in Part 258 of Title 40 of the CFR (also known as Subtitle D of the Resource Conservation and Recovery Act, RCRA). The majority of these regulations were promulgated on 9 October 1993. These regulations are summarized in a table included in Appendix A.

Part 258 has the following subparts:

Subpart A—General

Subpart B—Location Restrictions

Subpart C—Operating Criteria

Subpart D—Design Criteria

Subpart E—Ground-Water Monitoring and Corrective Action

Subpart F—Closure and Post-Closure Care

## Subpart G—Financial Assurance Criteria

### **3.4 Part 136 – Test Procedures for the Analysis of Pollutants**

Federal regulations related to the Test Procedures for the analyses of pollutants under the Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards for Landfills are presented in Part 136 of Title 40 of the CFR. A summary of the regulations is presented in Appendix A.

Part 136 has the following subparts:

Method 625—Base/Neutrals and Acids

Method 1625, Revision B—Semivolatile Organic Compounds by Isotope Dilution GC/MS.

### **3.5 Part 445 – Landfills Point Source Category**

Federal regulations related to the landfills point source category under the Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards for Landfills are presented in Part 445 of Title 40 of the CFR. A summary of the regulations is presented in Appendix A.

Part 445 has the following subparts:

Subpart A—RCRA Subtitle C Hazardous Waste Landfill

Subpart B—RCRA Subtitle D Non-hazardous Waste Landfill

### **3.6 Final Modification of the National Pollutant Discharge Elimination System (NPDES) Storm Water Multi-Sector General Permit (MSGP) for Industrial Activities (Federal Register, Volume 63, Part VII, 30 September 1998)**

The coverage of final modified MSGP includes Section L, Landfills and Landfill Application Sites. This regulation includes monitoring and reporting requirements and baseline permit requirements. A summary of the MSGP regulations is presented in Appendix A.

### **3.7 Subpart 60 GG—Standards of Performance for Stationary Gas Turbines and Subpart 60 WWS—Standards of Performance for Municipal Solid Waste Landfills**

The above two subparts of Title 40 of the CFR are prohibitory/source-specific regulations related to air quality that apply to municipal solid waste landfills. These regulations include emission control, emission limits, monitoring, testing, record keeping, and reporting requirements. A summary of these regulations is included in Appendix B.

While many local air districts within California have been delegated the responsibility for enforcing federal regulations, the U.S. Environmental Protection Agency has the ultimate responsibility for the implementation and enforcement of the federal air quality regulations.



It is possible for a particular piece of equipment to trigger both local air district and federal prohibitory/source-specific and permitting regulations.

### **3.8 Part 51.165—Review of New Sources and Modifications and Part 52.21—Prevention of Significant Deterioration**

The above two subparts of Title 40 of the CFR are permitting regulations related to air quality that can apply to municipal solid waste landfills. These permitting requirements include requirements for the installation of Best Available Control Technology (BACT), ambient monitoring, and air dispersion modeling. A summary of these regulations is included in Appendix B.

While many local air districts within California have been delegated the responsibility for enforcing federal regulations, the U.S. Environmental Protection Agency has the ultimate responsibility for the implementation and enforcement of the federal air quality regulations. It is possible for a particular piece of equipment to trigger both local air district and federal prohibitory/source-specific and permitting regulations.

## **4. Summary of State of California Requirements**

### **4.1 Introduction**

The State of California regulations related to solid waste disposal facilities are contained in different parts of Title 27 of the California Code of Regulations (CCR). In addition, there are supplemental regulations promulgated by the State Water Resources Control Board (SWRCB). The different State regulations are discussed in the following sections. Summaries of the different State regulations pertaining to landfills are presented in Appendix C.

### **4.2 Title 27—Environmental Protection**

Title 27 of the CCR covers requirements related to solid waste disposal sites. The requirements included in Title 27 include those of the California Integrated Waste Management Board (CIWMB) and the SWRCB. The scope of Title 27 includes waste classification, siting, construction standards, water quality monitoring and response program, operating criteria, daily and intermediate cover, handling and equipment, controls, gas monitoring and control, closure and post-closure maintenance standards. A summary of the Title 27 regulations is presented in Appendix C.

### **4.3 Resolution Number 93-62—Policy for Regulation of Discharges of Municipal Solid Waste**

This resolution, adopted by the SWRCB on 17 June 1993, required all California regional water quality control boards (CRWQCB) to revise the waste discharge requirements (WDR) of all dischargers owning or operating MSW landfills that had received solid waste after 9 October 1991, to bring such WDRs to full compliance both with the State Water Board's regulations governing discharges of waste to land and with federal MSW regulations (40 CFR, Part 258, discussed previously). A summary of Resolution Number 93-62 is included in Appendix C. To comply with the SWRCB Resolution Number 93-62, CRWQCBs issued region-specific orders applicable to landfills within their jurisdictions.

### **4.4 Order Number 97-03-DWQ—National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001**

Inactive or closed landfills, land application sites, and open dumps that have received industrial wastes may be subject to this general permit unless the storm water discharges from the sites are already regulated by an NPDES permit issued by the appropriate regional water board. This order also applies to MSW landfills. Facility operators of closed landfills that are regulated by waste discharge requirements (WDRs) may be required to comply with this general permit. A summary of this order is included in Appendix C.

#### 4.5 Enforcement Agency Inspections

Discussions with the local enforcement agency (EA) inspectors indicate that the CIWMB 52 form (“Disposal Site Inspection Report”) is typically used for landfill inspections. A copy of the form is included in Appendix D. The form requires the inspector to review and assess the following areas of landfill operations:

- Permits (e.g., complying with permits, significant change in operation)
- Location restrictions (e.g., airport safety)
- Operating criteria (e.g., signs, records, lighting)
- Personnel (e.g., training, site attendant)
- Confined unloading
- Spreading/compacting (stockpiling, grading of fill surfaces)
- Daily and intermediate cover (e.g., cover material availability, performance standards)
- Handling, equipment and maintenance (e.g., volume reduction, recovery, site maintenance)
- Controls (e.g., dust and litter control, air criteria)
- Gas monitoring and control (e.g., explosive gas control)
- Closure (e.g., closure plan submittal)
- Tires (e.g., fire prevention, disposal)

State regulations require that the EA visit and review MSW landfills at least once a month to assess the above listed landfill operation criteria.

## 5. Summary of Local Requirements

### 5.1 Introduction

There are two categories of local regulations related to solid waste disposal facilities:

- Regulations of the air districts, discussed in Section 5.2 and included in Appendix B.
- Regulations promulgated at the county, city, or other local levels.
- In general, the only significant local requirement for MSW landfills is the conditional use permit (CUP), discussed in Section 5.3. Summaries of the different local regulations are presented in Appendix D.

### 5.2 Requirements of Air Districts

There are 35 air pollution control districts or air quality management districts in California. Each district is responsible for developing and enforcing air quality regulations within its region. The district air quality regulations are classified as either prohibitory/source-specific or permitting regulations. Prohibitory/source-specific regulations can apply to either a particular type of equipment or to a particular pollutant. Prohibitory/source-specific regulations also apply to all gas turbines above a certain size, that were installed after 1978. Permitting regulations may apply to many types of sources of air pollution, including combustion equipment and hydrocarbon sources. The requirements of a permitting regulation are triggered either by a proposed modification to an existing piece of equipment or the proposed installation of new equipment.

In addition to the district air quality regulations, there are federal air quality regulations, discussed previously. While many districts have been delegated the responsibility for enforcing federal regulations, the U.S. Environmental Protection Agency has the ultimate responsibility for the implementation and enforcement of the federal air quality regulations. It is possible for a particular piece of equipment to trigger both district and federal prohibitory/source-specific and permitting regulations.

Details regarding the air quality regulations pertaining to landfills are presented in Appendix B. Table 1 within Appendix B presents a list of California air districts and the counties within the jurisdictions of each district. Table 2 lists the air quality regulation categories applicable to landfill operations. Table 3 provides a summary of district air quality regulations applicable to municipal solid waste landfills for each of the 35 air districts within California.

During the review of the air quality regulations of the different air districts, it was found that each of the 35 air districts in California has several types of air quality regulations applicable to landfills. These regulations include fugitive dust, opacity, fuel, combustion, engine, landfill, and permitting rules. Each type of rule includes a combination of emission limits, testing, monitoring, reporting, and emission control requirements. Depending on the rule,

these requirements are triggered by one or more of the following: date of installation/construction, emission level, and/or maximum rated capacity of the equipment or throughput of the facility.

Therefore, a summary of a single rule's requirements would need to include each of the specific rule requirements and the corresponding trigger levels. It was recognized that a list of trigger levels for all the rules for all 35 air districts would involve a considerable volume of documentation.

Consequently, in order to provide a comprehensive set of requirements that represents the range of applicable air quality regulations within the state, it was decided (with the approval of the CIWMB) to summarize the regulations for two examples of each type of rule. The two examples selected for this purpose were one urban district and one rural district. The urban district selected for this purpose was the South Coast AQMD, which is classified by the government as a non-attainment district for ozone. The rural district selected was the Shasta County AQMD, which is classified as an attainment district for ozone.

Table 4 within Appendix B presents the air rules applicable to landfills within these two air districts, including the corresponding trigger levels. The rules applicable to landfills listed in the table include those for landfill regulations, internal combustion reciprocating engines, gas turbines, combustion contaminants, gaseous fuels, fugitive dust, permitting, new source review, prevention of significant deterioration, visible emissions, and nuisance.

### **5.3 Available California County and City Codes, Ordinances, and Regulations**

At the county and city level, GeoSyntec attempted to obtain and review pertinent codes, regulations and ordinances that would consider site specific conditions, such as California Environmental Quality Act (CEQA) and local land use conditions relevant to understanding environmental performance of MSW landfills.

To identify and obtain copies of these documents, a project team member attempted to complete telephone contacts with representatives of each local Enforcement Agency (EA). These regulators were requested to identify codes, ordinances and regulations related to MSW landfills issued at the county and, if applicable, city levels. If such regulations and codes existed, according to the EA, a copy of those documents was requested for further review and assessment.

Generally, the majority of the EAs indicated that their counties or cities are required to follow the state regulations with respect to MSW landfill siting, construction, operation, closure, postclosure maintenance and inspection requirements. Out of the 65 EAs contacted, 16 did not respond to inquiries despite multiple messages left (Appendix D). Out of the remaining 49 EAs, codes, ordinances and regulations were received from the following counties and cities: Alturas County, Calaveras County, City of Fortuna, Lassen County, Modoc County, Nevada County, Plumas County, Portola County, City of Rio Dell, San Louis Obispo County, Santa Clara County, Sierra County, Siskiyou County, City of Susanville, City of West Covina, and Ventura County.

Even though the aforementioned EAs identified the regulations and ordinances as applicable to MSW landfill issues, GeoSyntec's review indicates that in many instances the cited regulations are not applicable to landfills. Of all of the regulations, codes and ordinances received for the EAs, the most relevant information is included in the San Louis Obispo County Code of Chapter 8.12 (Solid Waste Management), dated March 1993. Section 8.12.600 (Solid Waste Facilities) of the County Code requires that *"A permit shall be required to operate a solid waste facility..."* (Section 8.12.610, Permit – Required), *"Solid waste facility permits... are required to be reviewed by the Local Enforcement Agency every five years..."* (Section 8.12.620, Permit – Term), and that *"Solid waste facility... within the County shall be maintained in compliance with the State Minimum Standards for Solid Waste Handling and Disposal, Title 14 California Code of Regulations, commencing with Section 17200. All solid waste facilities shall be subject to inspection by the Local Enforcement Agency..."* (Section 8.12.630, Solid Waste Disposal Facilities). However, these requirements are almost identical with the California State requirements of Title 27 of the CCR.

In general, specific local regulatory requirements related to the performance of MSW landfills were not found. Typically, such regulations do not exist and, in the few cases where they do exist, they typically refer to the State regulations with respect to landfill siting, construction, operation, closure, postclosure maintenance and inspection requirements.

Local requirements for landfill performance are typically contained in Conditional Use Permits (CUPs) issued under local land use regulations. Typically, CUPs, where applicable, are issued by the local planning agencies. For the purpose of obtaining a general understanding of the CUPs applicable to MSW landfills in different parts of the state, GeoSyntec requested CUPs from ten landfills from around the state. These landfills were selected such that they represent landfills with both private and public owners and cover a relatively wide range in terms of size, capacity, landfill age, and other pertinent features.

GeoSyntec's enquiry revealed that three out of the ten selected landfills did not require a CUP. For the remaining seven landfills, copies of the CUPs were obtained and reviewed. A summary of the landfill performance requirements contained in the seven CUPs reviewed by GeoSyntec is presented in Appendix D.

# **APPENDIX A**

## **Summary of Federal Regulations (except air quality)**

## Part 257 – Criteria for Classification of Solid Waste Disposal Facilities and Practices

<b>Part 257—Criteria for Classification of Solid Waste Disposal Facilities and Practices</b>	
<b>Page</b>	<b>Description</b>
<b>Subpart A - Classification of Solid Waste Disposal Facilities and Practices</b>	
1	257.1 Scope and purpose. Adopts criteria to ensure that non-municipal non-hazardous waste disposal units that receive conditionally exempt small quantity generator waste do not present risks to human health and the environment. Facilities that fail to satisfy these criteria are considered open dumps, which are prohibited. Situations where these criteria do not apply are described.
3	257.3 Criteria for classification of solid waste disposal facilities and practices. 257.3-1 Floodplains. Facilities or practices in floodplains shall not restrict the flow of the base flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste, so as to pose a hazard to human life, wildlife, or land or water resources. 257.3-2. Endangered species. Facilities or practices shall not cause or contribute to the taking of any endangered or threatened species of plants, fish, or wildlife; nor shall it result in the destruction or adverse modification of the critical habitat of endangered or threatened species.
4	257.3-3 Surface water. A facility or practice shall not violate the requirements of the NPDES or cause a discharge of dredged or fill material to or non-point source pollution of waters of the US that violates applicable legal requirements. 257.3-4 Ground water. A facility or practice shall not contaminate an underground drinking water source beyond the solid waste boundary or beyond an alternative boundary established by the court if it finds that such a change would not result in contamination of groundwater that may be needed or used for human consumption. Lists several factors to be considered.
5	257.3-5 Application to land used for the production of food-chain crops (interim final). Lists numerical restrictions for several parameters.
6	257.3-6 Disease. Minimize the on-site population of disease vectors through periodic application of cover material or other techniques to protect public health.
7	257.3-7 Air. Facility or practice shall not engage in open burning of residential, commercial, institutional, or industrial waste. 257.3-8 Safety. Explosive gases - the concentration shall not exceed 25% of the lower explosive limit for the gases in facility structures. Additional restrictions are related to fires, bird hazards to aircraft, access.
<b>Subpart B - Disposal Standards for the Receipt of Conditionally Exempt Small Quantity Generator (CESQG) Wastes at Non-Municipal, Non-Hazardous Waste Disposal Units</b>	
8	257.5 Applicability: To owners/operators of non-municipal, non-hazardous waste disposal units that receive CESQG hazardous waste.
9	257.8 Floodplains. New or existing units or lateral expansions must not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to human health and the environment. 257.9 Wetlands. New units or lateral expansions cannot be located in wetlands unless specific demonstrations can be made as set forth here.
10	257.13 Existing units that cannot make the demonstration specified for floodplains by 1/1/98 must not accept CESQG hazardous waste. Groundwater Monitoring and Corrective Action 257.21 Applicability. Groundwater monitoring requirements may be suspended if it can be demonstrated that there is no potential for migration of hazardous constituents from that unit to the uppermost aquifer during the active life of the unit plus 30 years; gives requirements. Existing units must comply by 7/1/98. New units must comply with groundwater monitoring requirements before placing waste in the unit.



<b>Part 257—Criteria for Classification of Solid Waste Disposal Facilities and Practices</b>	
<b>Page</b>	<b>Description</b>
	Alternative schedules and monitoring programs may be approved if certain conditions are met; conditions and factors to be considered are given. Groundwater monitoring shall be conducted throughout the active life plus 30 years.
12	257.22 Groundwater monitoring systems. Must consist of a sufficient number of well, installed at appropriate locations and depths, to yield groundwater samples from the uppermost aquifer. Must represent the quality of background groundwater that has been affected by leakage from the unit and the quality of groundwater passing the relevant point of compliance, which shall be no more than 150 meters from the waste management unit boundary
13	and located on land owned by the facility owner. Gives factors for considering point of compliance. May approve a multi-unit groundwater monitoring system when the facility has several units, provided certain conditions are met. General requirements for monitoring well casing, screening or perforating, sealing; documentation; number, spacing, and depth of monitoring systems; hydrogeologic characterization; certification.
13-15	257.23 Groundwater sampling and analysis requirements. General requirements for consistent sampling and analysis procedures; documentation of procedures and techniques for sample collection, sample preservation and shipment, analytical procedures, chain-of-custody control, QA/QC; sampling and analytical methods; sampling procedures and frequency; groundwater elevations to determine flow and direction; background groundwater quality; number of samples; five statistical test methods to be used in evaluating groundwater monitoring data; determination of statistically significance increases in a parameter or constituent.
15	257.24 Detection monitoring program. Required at all groundwater monitoring wells for constituents listed in appendix I of 20 CFR Part 258 unless an alternative list is approved based on considerations of several factors.
16	Monitoring frequency shall be at least semiannual during the active life of the unit plus 30 years. Requires at least four independent samples from each well (background and downgradient) be collected and analyzed for the Appendix I constituents (or approved alternative list) during the first semiannual sampling event, and one sample from each well during subsequent semiannual sampling events. An alternative frequency no less than annual may be approved based on several factors. Req'ts if there is a statistically significant increase over background for one or more of the constituents listed in Appendix I or in the alternative list re: notices within 14 days; establish an assessment monitoring program within 90 days; demonstrate a source other than the unit or an error in sampling or natural variation in groundwater quality within 90 days (or initiate an assessment monitoring program). 257.25 Assessment monitoring program. Required when a statistically significant increase over background has detected for one or more of the constituents listed in Appendix I of 40 CFR Part 258 or in the approved alternative list. Within 90 days of triggering an assessment monitoring program and annually thereafter, sample and analyze the groundwater for all constituents listed in appendix II of 40 CFR part 258. A minimum of one sample from each downgradient well must be collected and analyzed during each sampling event. For any constituent detected in the downgradient wells as the result of the complete appendix II analysis, a minimum of four independent samples from each well (background and downgradient) must be collected

<b>Part 257—Criteria for Classification of Solid Waste Disposal Facilities and Practices</b>	
<b>Page</b>	<b>Description</b>
	and analyzed to establish background for the new constituents. Alternate sampling frequency, number of wells, etc. may be approved based on consideration of several factors.
17	Req'ts after obtaining results include notice within 14 days; resampling within 90 days or at least semiannually or according to an alternative sampling frequency; establishing background concentrations for any constituents detected; provisions for continued
18	assessment monitoring and characterization in the event that Appendix II constituents are detected; characterize the nature and
19-21	extent of the release; install one additional monitoring well at the facility boundary in the direction of contaminant migration; initiate an assessment of corrective measures within 90 days; demonstrate that a source other than the non-municipal non-hazardous waste disposal unit caused the contamination; establish a groundwater protection standard based on MCLs and background concentrations or alternatives as approved (i.e., health-based levels).
	257.26 Assessment of corrective measures. Must be initiated within 90 days of finding any of the Appendix II constituents at a statistically significant level exceeding the groundwater protection standards. Must continue to monitor. The assessment of corrective measures must include an evaluation of the effectiveness of meeting all the requirements and objectives of the remedy; performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies; time to begin and complete the remedy, costs, institutional requirements, public meeting.
	257.27 Selection of remedy. Req'ts for notice of remedy selection, criteria remedies must meet, evaluation factors, schedule and factors to consider in developing it. State can require owner or operator to undertake source control measures or other measures to eliminate or minimize further releases to the groundwater, prevent exposure to groundwater, or remediate groundwater to concentrations that are technically practicable and significantly reduce threats to human health or the environment.
22	257.28 Implementation of the corrective action program. General requirements for establishing and implementing a corrective action groundwater monitoring program. Gives criteria for considering remedies to be complete - i.e., when the owner or operator complies with groundwater protection standards at all points within the plume of contamination that lie beyond the groundwater monitoring system and compliance with groundwater protection standards has been achieved by demonstrating that concentrations of Appendix II constituents have not exceeded groundwater protection standards for a period of three consecutive years using the statistical procedures and performance standards in 257.23 (g) and (h). An alternative length of time for demonstrating compliance may be approved based on consideration of several factors given..
	257.3 Recordkeeping requirements. For location restriction demonstrations under 257.7 through 257.12, and demonstration, certification, finding, monitoring, testing, or analytical data required in 257.21 through 257.28.

<b>Part 258—Criteria for Municipal Solid Waste Landfills</b>	
<b>Page</b>	<b>Description</b>
<b>Subpart A - General</b>	
1	258.1 Purpose, scope, and applicability. Purpose is to establish minimum national criteria under RCRA for all municipal solid waste landfill (MSWLF) units that are used to dispose of sewage sludge. Applies to owners and operators of new MSWLF units, existing MSWLF units, and lateral expansions, with some exceptions. Inactive landfills that fail to complete cover installation within 1 year
2	are subject to all the requirements of this part 258 unless otherwise specified. Gives compliance dates in the 1993-1998 range.
3	Some exemptions apply to MSWLF units that dispose of less than 20 tons/day, provided certain conditions are met. If an owner or operator knows that groundwater contamination results from the unit and an exemption has been claimed, the owner or operator shall notify the state Director and comply with subparts D and E of this part.
5	258.3 The owner or operator of a MSWLF must comply with any other applicable federal rules, laws, regulations, or other requirements.
<b>Subpart B - Location Restrictions</b>	
6	258.10 Airport safety. MSWLF units near airports (distances are given) must demonstrate no bird hazard posed to aircraft.
	258.11 Floodplains. MSWLF units in 100-year floodplains must demonstrate no restriction of flow of 100-year flood, no reduction in temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a threat to human health and the environment. Must place the demonstration in the operating record and notify the State Director that is has been placed.
7	258.12 Wetlands. New MSWLF units and lateral expansions shall not be located in wetlands, unless the owner or operator can make the demonstrations set forth herein.
	258.13 Fault areas. New MSWLF units and lateral expansions shall not be located within 200 feet of a fault that has had displacement in Holocene time unless the owner/operator demonstrates that an alternative setback distance of less than 200 feet will prevent will prevent damage to the structural integrity of the MSWLF unit and will be protective of human health and the environment.
8	258.14 Seismic impact zones. New MSWLF units and lateral expansions shall not be located in seismic impact zones, unless the owner/operator demonstrates to the Director of an approved State/Tribe that all containment structures, including liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site. Must place the demonstration in the operating record and notify the State Director that is has been placed.
	258.15 Unstable areas. Owner/operators of new MSWLF units, existing MSWLF units, and lateral expansions located in an unstable area must demonstrate that engineering measures have been incorporated into the MSWLF unit's design to ensure that the integrity of the structural components of the MSWLF unit will not be disrupted. Factors to consider are included. Must place the demonstration in the operating record and notify the State Director that is has been placed.
	258.16 Closure of existing municipal solid waste landfill units. Existing MSWLF units that cannot make the demonstrations pertaining to airports, floodplains, or unstable areas must close by 10/9/96, with a 2-year extension possible if they can demonstrate that there is no available alternative disposal capacity and there is no immediate threat to human health and the environment.
<b>Subpart C - Operating Criteria</b>	
	258.20 Procedures for excluding the receipt of hazardous waste. Owner/operators must implement a program for detecting and preventing the disposal of regulated hazardous wastes as defined in part 261 and PCBs as defined in part 761. Program to include random

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9	<p>inspections of incoming loads, inspection records, training on waste recognition, and notification.</p> <p>258.21 Cover material requirements. Owner/operators must cover disposed solid waste with 6 inches of earthen material at the end of each operating day, or at more frequent intervals if necessary, to control disease vectors, fires, odors, blowing litter, and scavenging. Alternative materials or an alternative thickness may be approved by the Director. Director may approve a temporary waiver from cover req'ts due to extreme seasonal climatic conditions. Alternative frequencies for cover req'ts may be approved for owner/operators of MSWLFs that dispose of 20 tons of municipal solid waste per day or less.</p> <p>258.22 Disease vector control. Owner/operators must prevent or control on-site populations of disease vectors.</p> <p>258.23 Explosive gases control. Owner/operators must ensure that the concentration of methane gas generated by the facility does not exceed 25 percent of lower explosive limit for methane in facility structures and does not exceed the lower explosive limit for methane at the facility property boundary. Owner/operators must implement a routine methane monitoring program, the type and frequency to depend on soil, hydrogeologic, and hydraulic conditions and the location of facility structures and property boundaries. The minimum frequency of monitoring shall be quarterly. If methane gas levels exceed allowable levels, owner/operators must take steps to protect human health; within 7 days of detection, record methane gas levels detected and actions taken in operating record; within 60 days of detection, implement a remediation plan for the methane gas releases that includes a description of the nature and extent of the problem and the proposed remedy, and place a copy of the plan in the operating record. The Director may establish alternative schedules for these actions. Alternative frequencies for monitoring req'ts may be approved for owner/operators of MSWLFs that dispose of 20 tons of municipal solid waste per day or less.</p>
10	<p>258.24 Air criteria. Units must not violate applicable requirements developed under a State Implementation Plan (SIP) . Open burning of solid waste is prohibited, with some exceptions (infrequent burning of agricultural wastes, silvicultural waste, etc.)</p> <p>258.25 Access requirements. Owner/operators must control public access and prevent unauthorized vehicular traffic and illegal dumping.</p> <p>258.26 Run-on/run-off control systems. Owner/operators must design, construct, and maintain a run-on control system to prevent flow into the active portion of the landfill during the peak discharge from a 25- year storm and to collect and control at least the water volume resulting from a 24-hour, 25-year storm.</p> <p>258.27 Surface water requirements. MSWLF units shall not cause a discharge of pollutants into waters of the US that violates the Clean Water Act, including NPDES requirements, or a nonpoint source of pollution to waters of the US that violates a mgt plan.</p> <p>258.28 Liquids restrictions. Bulk or noncontainerized liquid waste may not be placed in MSWLF units unless the waste is household waste other than septic waste or the waste is leachate or gas concentrate from the MSWLF unit and if the unit has a composite liner and leachate collection system. Containers are not allowed in the MSWLF unit unless the container is small, is designed to hold liquids, or is household waste.</p>
11	<p>258.29 Recordkeeping requirements. Records to be retained are listed - location restriction demonstration, inspection records, training procedures, and notification procedures, gas monitoring results, MSWLF design documentation for placement of leachate or gas condensate in a MSWLF unit, information required by subpart E of this part, closure and post-closure care plans and other closure requirements, cost estimates and financial assurance required by subpart G, information demonstrating compliance with</p>

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	small community exemption. Owner/operator must notify State Director when documents have been placed or added to the operating record.
<b>Subpart D - Design Criteria</b>	
	<p>258.40 Design criteria. New MSWLF units and lateral expansions shall be constructed:</p> <ul style="list-style-type: none"> <li>- in accordance with a design that ensures that the concentration values listed in Table I of this section will not be exceeded in the uppermost aquifer at the relevant point of compliance as specified by the Director.</li> <li>- with a composite liner and a leachate collection system designed and constructed to maintain less than 30 cm depth of leachate over the liner. Composite liner consists of a minimum 30-mil flexible membrane liner overlying a 2-foot layer of compacted soil with a hydraulic conductivity of no more than <math>1 \times 10^{-7}</math> cm/sec. HDPE liner shall be at least 60 mils thick. General design considerations are listed.</li> </ul>
<b>Subpart E - Ground-Water Monitoring and Corrective Action</b>	
12	258.50 Applicability. These requirements may be suspended if the owner/operator can demonstrate that there is no potential for migration of hazardous constituents from the MSWLF unit to the uppermost aquifer during the active life or the post-closure care period. Certifications and factors to be considered are listed. Alternative schedules may be set for demonstrating compliance
13	with most of the requirements set forth.
14	<p>258.51 Ground-water monitoring systems. Must be installed that consists of sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the uppermost aquifer that represent background groundwater quality and the quality of groundwater passing the relevant point of compliance specified by Director of an approved state or at the unit boundary of an unapproved state. Requires wells at relevant point of compliance or at unit boundary. Director may approve a multiunit groundwater monitoring system depending on several factors. General casing, screening, sealing requirements are given. Owner/operator must notify State Director that design, installation, development, and decommission of any monitoring wells, piezometers, etc. documentation have been placed in operating record. General factors affecting number, spacing, and depths of monitoring systems are given.</p>
15-16	<p>258.53 Ground-water sampling and analysis requirements. Must include consistent sampling and analysis procedures to meet objectives. General requirements are given for measuring groundwater elevations, establishing background groundwater quality, five possible statistical methods and relevant performance standards to use in evaluating groundwater monitoring data for each hazardous constituent.</p>
17	<p>258.54 Detection monitoring program. Required at MSWLF units at all groundwater monitoring wells for constituents listed in Appendix I to this part, with variations if approved based on consideration of several factors. Monitoring frequency shall be at least semiannual during the active life of the facility (including closure) and the post-closure care period. A minimum of four independent samples from each wells (background and downgradient) must be collected and analyzed for appendix I constituents or approved alternative list during first semiannual sampling event. At least one sample per well must be obtained and analyzed during subsequent semiannual sampling events. An alternative frequency of monitoring may be approved but must be no less frequently than annual and based on several factors. If owner/operator determines there is a statistically significant increase over background of one or</p>

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	more of the constituents listed in appendix I at any monitoring well at the boundary, then must notify within 14 days and establish an assessment monitoring program within 90 days or demonstrate an alternate source of the contamination.
18	258.55 Assessment monitoring program. Required whenever a statistically significant increase over background is detected for one or more of the constituents listed in appendix I. Within 90 days of triggering an assessment monitoring program and annually thereafter, owner/operator must sample and analyze for appendix II constituents. For any appendix II constituent detected, a min of four independent samples from each well must be collected and analyzed to establish background for the constituents. The analyte list and monitoring frequency may be modified if approved based on several factors. After obtaining the results of the initial or subsequent sampling events required, within 14 days must meet notice requirements to identifying appendix II constituents detected and within 90 days and at least semiannually thereafter, resample all wells and analyze for all appendix I and those appendix II constituents detected. At least one sample per well must be collected and analyzed during these sampling events. An alternative frequency may be approved but must be no less than annual. The alternative frequency shall be based on several factors.
	If the concentrations of all appendix II constituents are shown to be at or below background values using statistical procedures for two sampling events, the owner/operator must notify the State Director of this finding and may return to detection monitoring.
19	If the concentrations of any appendix II constituents are above background values but below the groundwater standard using statistical procedures, the owner/operator must continue assessment monitoring in accordance with this section.
	If one or more appendix II constituents are detected at statistically significant levels above the groundwater protection standard in any sampling event, the owner/operator must within 14 days place notice in the operating record and notify the State Director and all appropriate local government officials. Owner/operator must also characterize the nature and extent of the release, install at least one additional well at the facility boundary, notify all persons owning land where contaminants have migrated, and initiate an assessment of corrective measures within 90 days or demonstrate an alternate source of contamination or an error in sampling.
	Owner/operator must establish a groundwater protection standard for each appendix II constituent detected in groundwater that is the MCL, background concentration, or an alternative health-based level that satisfies several criteria presented herein.
20	258.56 Assessment of corrective measures. Within 90 days of finding that any appendix II constituents have been detected at a statistically significant level exceeding the groundwater protection standards, the owner/operator must initiate an assessment of corrective measures. General requirements for the assessment are given.
	258.57 Selection of remedy. Based on the results of the corrective measures assessment conducted, the owner/operator must select a remedy that meets standards listed herein. The owner/operator must prepare a report describing the selected remedy and provide notice within 14 days of selecting the remedy. Remedies must be protective of human health and the environment, attain the groundwater protection standard, control the source(s) of releases so as to reduce or eliminate further releases of appendix II constituents to the environment, and comply with standards for management of wastes. Remedy evaluation and schedule factors are given.
21	The Director of an approved State may determine that remediation of a release of an appendix II constituent from a MSWLF is not necessary if the groundwater is already contaminated by a source other than the MSWLF, the affected groundwater is not
22	reasonably expected to be a source of drinking water, groundwater is not hydraulically connected with waters to which the

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23	<p>hazardous constituents are migrating, remediation of the release is technically impracticable, or remediation results in unacceptable cross-media impacts.</p> <p>258.58 Implementation of corrective action program. Owner/operator must establish and implement a corrective action program that meets the requirements of an assessment monitoring program, indicates the effectiveness of the corrective action remedy, and demonstrates compliance with the groundwater protection standard. Owner/operator must implement the corrective action remedy and take any interim measures necessary to ensure protection of human health and the environment. Factors in considering need for interim measures are given. Owner/operator must implement other methods or techniques if it is determined that requirements are not being achieved through the remedy selected. If owner/operator determines compliance with req'ts cannot be achieved practically, must obtain certification of impracticability, implement alternate measures to control exposure to humans and the environment, and implement alternate measures to control the sources of contamination, and provide notice within 14 days that alternate measures will be implemented. Compliance with the groundwater protection standards has been achieved by demonstrating that concentrations of appendix II constituents have not exceeded groundwater protection standards for a period of 3 consecutive years using the statistical procedures and performance standards. An alternative length of time may be approved based on several factors. Upon completion of the remedy, owner/operator must meet notice requirements within 14 days.</p>
<b>Subpart F - Closure and Post-Closure Care</b>	
24	<p>258.60 Closure criteria. Owner/operators must install a final cover system designed to minimize infiltration and erosion. Must be designed and constructed to: have a permeability less than or equal to the permeability of any bottom liner system or natural subsoil present, or a permeability no greater than <math>1 \times 10^{-5}</math> cm/sec, whichever is less; use an infiltration layer that contains a minimum 18 inches of earthen material; and use an erosion layer that contains a minimum of 6 inches of earthen material capable of sustaining native plant growth. An alternative final cover may be approved that meets the requirements of the layers described above. The Director may establish alternative req'ts for the infiltration layer for units that dispose of 20 tons or municipal solid waste per day or less based on several factors.</p> <p>Owner/operator must prepare a written closure plan that describes the steps necessary to close all MSWLF units at any point during their active life that includes a description of the final cover, an estimate of the largest area of the MSWLF requiring a final cover, an estimate of the maximum inventory of wastes ever on site over the active life of the unit, and a schedule for completing activities necessary to satisfy closure criteria in 268.60. Owner/operator must begin closure activities of each unit no later than 30 days after the date on which the MSWLF unit receives the known final receipt of wastes or no later than one year after the most recent receipt of wastes. Extensions beyond the one year may be granted based on unit capacity. Owner/operator must complete closure activities of each unit in accordance with the closure plan within 180 days following the beginning of closure. Extensions may be granted if necessity is demonstrated and human health and the environment are protected. Owner/operator must notify State Director that closure has been completed. Deed notation is required and guidelines are given.</p>
25	<p>258.61 Post-closure care requirements. Post-closure care to be provided for 30 years to maintain the integrity and effectiveness of the final cover, maintain and operate the leachate collection system, monitor the groundwater, maintain and operate the gas collection</p>

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	system. The post-closure period may be increased or decreased by the director if appropriate. Owner/operator must prepare a written post-closure plan that includes a description of the monitoring and maintenance activities required for each unit and the frequency at which those activities will be performed; contact information; a description of planned uses of the property during the post-closure period. Notification and certification requirements are given.
<b>Subpart G - Financial Assurance Criteria</b>	
25-38	
38	Appendix I to Part 258 - Constituent for Detection Monitoring
38-45	Appendix II to Part 258 - List of Hazardous Inorganic and Organic Constituents



<b>Federal Register/Vol. 65, No. 12/19 Jan. 2000</b> <b>Part II—EPA—Effluent Limitations Guidelines, Pretreatment Standards, and</b> <b>New Source Performance Standards for Landfills</b>	
<b>Page</b>	<b>Description</b>
<b>Part 136 - Test Procedures for the Analysis of Pollutants</b>	
3044	<p>Method 625 - Base/Neutrals and Acids</p> <p>1.0 EPA Method 625 Modification Summary - Additional semivolatile organic compounds listed in Tables 1 and 2 are added to all applicable calibration, spiking, and other solutions utilized in the determination of base/neutral and acid compounds by EPA Method 625.</p> <p>2.0 Section Modifications - For stock standard solutions, calibration standards, precision and accuracy requirements, matrix spike, QC check standard, method performance. Cites several tables.</p>
3046	<p>Method 1625 - Revision B - Semivolatile Organic Compounds by Isotope Dilution GC/MS</p> <p>1.0 EPA Method 1625 Revision B Modification Summary - Additional semivolatile organic compounds listed in Tables 1 and 2 are added to all applicable calibration, spiking, and other solutions utilized in the determination of EPA Method 1625.</p> <p>2.0 Section Modifications - For stock standard solutions, labeled compounds spiking solution, secondary standard, solutions for authentic mass spectra, calibration standards, precision and recovery standard, matrix spike, QC, and other analytical parameters. Cites several tables.</p>
<b>Part 445 - Landfills Point Source Category</b>	
3049	<p>445.1 General applicability - to discharges of wastewater from landfill units. Also lists several discharges to which it does not apply.</p> <p>445.3 General pretreatment standards - any source subject to this part that introduces wastewater pollutants into a POTW must comply with 40 CFR part 403.</p>
3050	<p>Subpart A - RCRA Subtitle C Hazardous Waste Landfill</p> <p>445.10 Applicability - to wastewater from landfills subject to the provisions of 40 CFR Parts 264 and 265.</p> <p>445.11 Specifies effluent limitations attainable by the application of the best practicable control technology currently available (BPT) for several parameters (BOD<sub>5</sub>, TSS, ammonia, a-terpineol, aniline, benzoic acid, naphthalene, p-creosol, phenol, pyridine, arsenic, chromium, zinc, pH) on a maximum daily basis.</p> <p>445.12 Any existing point source subject to this subpart must achieve the following effluent limitations that represent the application of BCT: limitations for BOD<sub>5</sub>, TSS, and pH are the same as the corresponding limitations specified in 445.11.</p> <p>445.13 Any existing point source subject to this subpart must achieve certain effluent limitations under 445.11 that represent the application of BAT.</p> <p>445.14 New source performance standards - must achieve same as those specified for 445.11.</p>
	<p>Subpart B - RCRA Subtitle D Non-Hazardous Waste Landfill</p> <p>445.20 Applicability - to discharges of wastewater from landfills subject to the provisions of 40 CFR parts 258 and 257.</p> <p>445.21 Specifies effluent limitations that represent application of BPT for BOD, TSS, ammonia, a-terpineol, benzoic acid, p-creosol,</p>

<b>Federal Register/Vol. 65, No. 12/19 Jan. 2000 Part II—EPA—Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards for Landfills</b>	
3051	<p>phenol, zinc, and pH.</p> <p>445.22 Any existing point source subject to this subpart must achieve the following effluent limitations that represent the application of best conventional pollutant control technology (BCT): limitations for BOD5, TSS, and pH are the same as the corresponding limitations specified in 445.21.</p> <p>445.23 Any existing point source subject to this subpart must achieve certain effluent limitations under 445.21 that represent the application of BAT.</p> <p>445.24 New source performance standards - must achieve same as those specified for 445.21.</p>

<b>Federal Register/Vol. 63, No. 189/30 Sept. 1998</b> <b>Part VII—EPA—Final Modification of the NPDES Storm Water Multi-Sector General Permit (MSGP) for Industrial Activities</b>	
Page	Description
Fact Sheet	
52431	I. Background - This MSGP replaces the 1992 final NPDES stormwater baseline industrial permit.
52432	II. Coverage of Final Modified MSGP - includes Sector L. Landfills and Landfill Application Sites
52436	III. Requirements for Transferred Facilities - Notification requirements include an NOI that identifies effects on properties covered by the National Historic Preservation Act and to species addresses by the Endangered Species Act; uses the 1987 standard industry classification (SIC) code system. Includes special conditions for non-stormwater discharges, releases o reportable quantities of hazardous substances and oil, and co-located industrial facilities.
52438	Non-stormwater discharges - Authorizes potable water sources, uncontaminated groundwater, and a few others provided the discharges are identified in the SWPPP and appropriate pollution prevention measures are included for the discharges.
52439	SWPPP requirements - must identify a pollution prevention team, assess potential sources of stormwater pollution, implement BMPS, conduct a comprehensive site inspection/compliance evaluation.
52440	<p>Monitoring and reporting requirements -</p> <p>Sampling schedule - Baseline permit required sampling once or twice a year. MSGP requires quarterly monitoring, as appropriate, for years 2 and 4 of the term of the permit (but the years specified - 1996-1997/1998-1999 - have passed)</p> <p>Sample type - Only a grab sample is required fro most sectors, to be taken within 30 minutes of discharge, unless this is impractical, in which case sampling is required within the first hour of discharge.</p> <p>Quarterly visual examination requirements - Examine for the presence of color, odor, clarity, floating solids, foam, oil sheen, or other obvious indicators of stormwater pollution. Obtain samples during each calendar quarter. Maintain reports of quarterly sampling on site with the SWPPP.</p> <p>Reporting requirements - Submit monitoring results to the permitting authority at the end of each year in which sampling is required. Results of quarterly visual observations to be retained on site with the SWPPP.</p>
52467	<p>Appendix B - Summary of MSGP and Baseline Permit Requirements for Landfills, Land Application Site, and Open Dumps</p> <p>Baseline - Land disposal units must monitor semiannually for ammonia, magnesium (dissolved), TKN, COD, TDS, TOC, oil and grease, pH, total recoverable [petroleum hydrocarbons], arsenic, barium, cadmium, chromium, cyanide, lead, selenium, silver, total mercury, and acute WET.</p> <p>MSGP - Landfills, land application sites, and open dumps must collect quarterly grab samples for total recoverable iron and TSS during second and fourth years of permit coverage. Municipal solid waste landfills closed in accordance with 40 CFR 258.60 are not required to monitor total recoverable iron. All faciliateis must conduct quarterly visual examinations of storm water</p>

<b>Federal Register/Vol. 63, No. 189/30 Sept. 1998</b> <b>Part VII—EPA—Final Modification of the NPDES Storm Water Multi-Sector General Permit (MSGP) for Industrial Activities</b>	
	<p>discharges unless inactive and unstaffed. All facilities must conduct quarterly visual examinations of stormwater discharges unless inactive and unstaffed. All facilities may exercise the low concentration waiver, inactive and unstaffed waiver, or alternative certification in lieu of analytical monitoring.</p> <p>MSGP sector-specific SWPPP considerations</p> <ul style="list-style-type: none"><li>- Must identify specific waste that have been disposed.</li><li>- Provide data on leachate generated at the site.</li><li>- Additional sources of pollutants must be identified under risk identification.</li><li>- Additional sediment and erosion control requirement.</li></ul> <p>Inspections for active landfills -</p> <ul style="list-style-type: none"><li>Inspections - weekly</li><li>Monthly for finally stabilized facilities and those located in arid areas.</li><li>Monthly inspections if stabilized on during arid seasons.</li></ul> <p>Inspections for inactive landfills - quarterly</p> <p>Annual comprehensive site compliance evaluation.</p>

## **APPENDIX B**

# **Summary of Federal Regulations and California Air District Regulations on Air Quality**

## Air Districts

There are 35 air pollution control/air quality management districts in California. Each district is responsible for developing and enforcing air quality regulations in their region. Districts can be comprised of one county, such as the Shasta County Air Quality Management District, or of several counties (or portions of counties), such as the Bay Area Air Quality Management District. The following table summarizes the jurisdictions for each district in California.

<b>Table 1 California Air Districts</b>	
<b>District</b>	<b>County (ies)</b>
Amador County Air Pollution Control District	Amador
Antelope Valley Air Pollution Control District	Northern Los Angeles County
Bay Area Air Quality Management District	Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, portions of Solano and Sonoma
Butte County Air Pollution Control District	Butte
Calaveras County Air Pollution Control District	Calaveras
Colusa County Air Pollution Control District	Colusa
El Dorado County Air Pollution Control District	El Dorado
Feather River Air Quality Management District	Yuba and Sutter
Glenn County Air Pollution Control District	Glenn
Great Basin Unified Air Pollution Control District	Alpine, Inyo, Mono
Imperial County Air Pollution Control District	Imperial
Kern County Air Pollution Control District	Eastern Kern County
Lake County Air Quality Management District	Lake
Lassen County Air Pollution Control District	Lassen
Mariposa County Air Pollution Control District	Mariposa
Mendocino County Air Quality Management District	Mendocino
Modoc County Air Pollution Control District	Modoc
Mojave Desert Air Quality Management District	Portions of San Bernardino and Riverside
Monterey Bay Unified Air Pollution Control	Monterey, Santa Cruz, San Benito

<b>Table 1 California Air Districts</b>	
<b>District</b>	<b>County (ies)</b>
District	
North Coast Unified Air Quality Management District	Del Norte, Humboldt, Trinity
Northern Sierra Air Quality Management District	Nevada, Sierra, Plumas
Northern Sonoma County Air Pollution Control District	Portion of Sonoma
Placer County Air Pollution Control District	Placer
Sacramento Metropolitan Air Quality Management District	Sacramento
San Diego County Air Pollution Control District	San Diego
San Joaquin Valley Unified Air Pollution Control District	Fresno, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare, western Kern
San Luis Obispo County Air Pollution Control District	San Luis Obispo
Santa Barbara County Air Pollution Control District	Santa Barbara
Shasta County Air Quality Management District	Shasta
Siskiyou County Air Pollution Control District	Siskiyou
South Coast Air Quality Management District	Los Angeles, Orange, portions of Riverside and San Bernardino
Tehama County Air Pollution Control District	Tehama
Tuolumne County Air Pollution Control District	Tuolumne
Ventura County Air Pollution Control District	Ventura
Yolo-Solano Air Quality Management District	Yolo and a portion of Solano

## Air Quality Regulations

District air quality regulations are classified as either prohibitory/source-specific or permitting regulations. Prohibitory/source-specific regulations can apply to a particular type of equipment such as gas turbines or to a particular pollutant such as fugitive dust. Prohibitory/source-specific regulations also apply to both existing equipment and future equipment. For example, a gas turbine rule may apply to all gas turbines above a certain size that were installed after 1978. Permitting regulations apply to many types of sources of air pollution, including combustion equipment (such as internal combustion engines) and hydrocarbon sources (such as automotive paint spray booths). The requirements of a permitting regulation are triggered either by a proposed modification to an existing piece of equipment or the proposed installation of new equipment. In addition to district air quality regulations, there are also federal air quality regulations. As with the district regulations, federal regulations are also divided into source-specific and permitting regulations. While many districts have been delegated the responsibility for enforcing federal regulations, the U.S. Environmental Protection Agency has the ultimate responsibility for the implementation and enforcement of federal air quality regulations. It is possible for a particular piece of equipment to trigger both district and federal prohibitory/source-specific and permitting regulations. The following table summarizes the regulation categories developed for this analysis:

<b>Table 2</b>			
<b>Air Quality Regulation Categories for Landfill Operations</b>			
<b>Regulation Categories</b>	<b>Type of Regulations</b>	<b>Type of Equipment Affected</b>	<b>Pollutants Controlled</b>
Landfill Regulations	Prohibitory/Source-Specific	Existing and new landfills including landfill gas collection and control systems	VOC, Toxics
Engine/Gas Turbine Regulations	Prohibitory/Source-Specific	Existing and new stationary internal combustion engines and gas turbines	NO <sub>x</sub> , CO
Combustion Contaminants Regulations	Prohibitory/Source-Specific	Existing and new landfill gas flares, stationary internal combustion engines and gas turbines	NO <sub>x</sub> , CO, SO <sub>x</sub> , PM
Gaseous Fuel Regulations	Prohibitory/Source-Specific	Existing and new landfill gas flares, stationary internal combustion engines and gas turbines	SO <sub>x</sub>
Fugitive Dust Regulations	Prohibitory/Source-Specific	Existing and new landfill haul roads, landfill excavation activities, waste dumping, waste covering	Dust (PM)
Permitting NSR/PSD Regulations	Permitting	New and modified landfill gas collection	NO <sub>x</sub> , CO, SO <sub>x</sub> , VOC, PM,



<b>Table 2 Air Quality Regulation Categories for Landfill Operations</b>			
<b>Regulation Categories</b>	<b>Type of Regulations</b>	<b>Type of Equipment Affected</b>	<b>Pollutants Controlled</b>
		and control systems, leachate/condensate collection and storage systems, landfill gas flares, stationary internal combustion engines and gas turbines	Toxics
Visible Emissions Regulations	Prohibitory/Source-Specific	Existing and new landfill gas flares, stationary internal combustion engines and gas turbines	PM
Nuisance Regulations	Prohibitory/Source-Specific	Existing and new landfills	Odor, dust (PM)

Notes (Table 2):

VOC: Volatile organic compounds

CO: carbon monoxide

NOx: oxides of nitrogen

SOx: sulfur oxides

PM: particulate matter

Both the prohibitory/source-specific and permitting regulations include various emission limits, emission control requirements, and monitoring/testing/reporting requirements. In addition, permitting regulations can also require the performance of air dispersion modeling to insure that state and federal ambient air quality standards are not violated. Furthermore, permitting regulations can also include the requirement for an applicant to obtain emission offsets so that there is no net emission increase associated with a proposed project. The applicability trigger levels and specific requirements of the prohibitory/source-specific and permitting regulations (i.e., emission limits, control equipment, monitoring, etc.) will differ depending on the District and size of equipment/operation in question.

A permitting regulation establishes requirements for the review of new and modified equipment that emit air pollutants to ensure that the operation of such equipment does not interfere with progress in attainment of state and national air quality standards. Such a permitting program includes requirements for Best Available Control Technology (BACT), air quality impact analysis, and emission offsets. Under a typical permitting program, an applicant must apply BACT to any new or modified equipment resulting in an increase in emissions in excess of 10 pounds per day. In addition, the applicant must demonstrate with dispersion modeling that the emissions increase from the proposed new or modified equipment will not cause a violation of a state or national air quality standard. Furthermore, a typical permitting regulation requires that an applicant obtain emission offsets for emission increases from new or modified equipment of 50 tons per year or more.

## Federal Regulations

The following two federal prohibitory/source-specific regulations can apply to municipal solid waste landfills:

- 40 CFR 60 Subpart GG (Standards of Performance for Stationary Gas Turbines)
- 40 CFR 60 Subpart WWW (Standards of Performance for Municipal Solid Waste Landfills)

As discussed above, these two prohibitory/source-specific regulations include emission control, emission limits, monitoring, testing, recordkeeping, and reporting requirements. The following are the federal permitting programs that can apply to municipal solid waste landfills:

- 40 CFR 52.21 (Prevention of Significant Deterioration)<sup>1</sup>
- 40 CFR 51.165 (Review of New Sources and Modifications)<sup>2</sup>

These permitting programs include requirements for the installation of BACT, ambient monitoring, and air dispersion modeling requirements.

## District Regulations

As discussed above, there are 35 districts in California. The following table (Table 3) summarizes the local regulations in these districts.

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<sup>1</sup> Applicable to cases where the local air district has not been delegated PSD program responsibilities.

<sup>2</sup> Federal NSR permitting program applicable for projects built on Tribal lands.

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
Amador County Air Pollution Control District	Regulation X Rule 1000 (Municipal Solid Waste Landfills) 6/9/98		Rule 210 (Specific Contaminants)		Rule 218 (Fugitive Dust Emissions) 5/16/00	Regulation IV (Authority to Construct Regulations) 8/25/98  Rule 500 (Procedures For Issuing Permits To Operate for Sources Subject to Title V)	Rule 202 (Visible Emissions)	Rule 205 (Nuisance)

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
Antelope Valley Air Pollution Control District	<p>Rule 1150 (Excavation Of Landfill Sites) 10/15/82</p> <p>Rule 1150.1 (Control Of Gaseous Emissions From Active Landfills) 4/5/85</p> <p>Rule 1150.2 (Control Of Gaseous Emissions From Inactive Landfills) 10/18/85</p>	<p>Rule 1110 (Emissions from Stationary Internal Combustion Engines Demonstration) 11/06/81</p> <p>Rule 1110.2 (Emissions from Gaseous- and Liquid-Fueled Internal Combustion Engines) 12/09/94</p> <p>Rule 1134 (Emissions Of Oxides Of Nitrogen From Stationary Gas Turbines) 8/8/97</p>	<p>Rule 407 (Liquid and Gaseous Air Contaminants) 4/02/82</p> <p>Rule 409 (Combustion Contaminants) 8/07/81</p> <p>Rule 474 (Fuel Burning Equipment) 12/4/81</p>	<p>Rule 431.1 (Sulfur Content of Gaseous Fuels) 11/17/95</p>	<p>Rule 403 (Fugitive Dust) 02/14/97</p>	<p>Rule 201 (Permit to Construct) 08/19/97</p> <p>Regulation XIII (New Source Review) 6/13/97</p> <p>Rule 1401 (New Source Review of Carcinogenic Air Contaminants) 12/7/90</p> <p>Rule 1402 (Control of Toxic Air Contaminants From Existing Sources) 4/08/94</p> <p>Regulation XVII (Prevention of Significant Deterioration) 01/06/89</p> <p>Regulation XXX</p>	<p>Rule 401 (Visible Emissions) 4/07/89</p>	<p>Rule 402 (Nuisance) 4/07/76</p>

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
						(Title V Permits) 3/17/98		
Bay Area Air Quality Management District	Regulation 8, Rule 34 (Solid Waste Disposal Sites) 5/2/84	Regulation 9, Rule 8 (Nitrogen Oxides and Carbon Monoxide From Stationary Internal Combustion Engines) 01/20/93  Regulation 9, Rule 9 (Nitrogen Oxides From Stationary Gas Turbines) 9/21/94	Regulation 9, Rule 1 (Sulfur Dioxide)			Regulation 2, Rule 2 (New Source Review) 5/17/00  Regulation 2, Rule 6 (Major Facility Review) 11/03/93	Regulation 6 (Particulate Matter And Visible Emissions) 12/19/90	Regulation 1, Rule 1-301 (Public Nuisance)

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
Butte County Air Pollution Control District	Rule 246 (Implementation of the Emission Guidelines for Municipal Solid Waste Landfills) 1/15/98		Rule 231 (Sulfur Oxide Emission Standard)		Rule 207 (Fugitive Dust Emissions) 02/96	Rule 402 (Authority to Construct) 4/96  Rule 430 (New Source Review) 4/96  Rule 1101 (Title V – Federal Operating Permits) 6/24/99	Rule 202 (Visible Emissions) 02/96	Rule 201 (Nuisance) 02/96
Calaveras County Air Pollution Control District			Rule 210 (Specific Contaminants)			Regulation IV (Authority To Construct Regulations)  Regulation X (Title V)	Rule 202 (Visible Emissions)	Rule 205 (Nuisance)

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
Colusa County Air Pollution Control District		Rule 2.36 (Stationary Internal Combustion Engines) 3/24/98	Rule 2.22 (Sulfur Oxides)			Rule 3.1 (Permits Required) 4/12/94  Rule 3.6 (Standards for Authority to Construct – New Source Review) 09/14/93  Rule 3.17 (Permits to Operate for Sources Subject to Title V) 1/11/94	Rule 2.13 (Visible Emissions)	Rule 2.10 (Nuisance)
El Dorado County Air Pollution Control District		Rule 233 (Stationary Internal Combustion Engines) 10/18/94	Rule 210 (Specific Contaminants)		Rule 223 (Fugitive Dust)	Rule 501 (General Permit Required)  Rule 522 (Title V – Federal Operating Permit Program)  Rule 523 (New Source Review)	Rule 202 (Visible Emissions)	Rule 205 (Nuisance)

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
Feather River Air Quality Management District	Rule 3.18 (Standards for Municipal Solid Waste Landfills) 6/2/97		3.10 (Sulfur Dioxide) 6/91		Rule 3.16 (Fugitive Dust Emissions) 4/11/94	Rule 10.1 (New Source Review) 4/11/94  Rule 10.3 (Federal Operating Permits) 11/1/93	Rule 3.0 (Visible Emissions) 6/91	Rule 2.13 (Nuisance) 01/89
Glenn County Air Pollution Control District	Article IV, Section 104 (Municipal Solid Waste Landfills)		Article IV, Section 89 (Sulfur Dioxide)			Article III, Section 50.3 (Prevention of Significant Deterioration)  Article III, Section 51 (New Source Review)  Article III, Section 51.2 (T-BACT for New or Reconstructed Major Source of Hazardous Air Pollutants)  Article VIII (Additional	Article IV, Section 76 (Visible Emissions)	Article IV, Section 78 (Nuisance)



**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

District	Landfill Regulations	Engine/Gas Turbine Regulations	Combustion Contaminants Regulations	Gaseous Fuel Regulations	Fugitive Dust Regulations	Permitting NSR/PSD Regulations	Visible Emissions Regulations	Nuisance Regulations
						Procedures for Issuing Permits to Operate for Sources Subject to Title V)		
Great Basin Unified Air Pollution Control District			<p>Rule 404 (Oxides of Nitrogen) 5/8/96</p> <p>Rule 416 (Sulfur Compounds and Nitrogen Oxides) 11/04/92</p>		Rule 401 (Fugitive Dust) 3/10/76	<p>Rule 200 (Permits Required) 9/5/74</p> <p>Rule 216 (New Source Review Requirements for Determining Impact on Air Quality) 3/10/79</p> <p>Rule 217 (Additional Procedures for Issuing Permits to Operate for Sources Subject to Title V) 3/8/95</p> <p>Rule 220 (Construction or Reconstruction of Major</p>		Rule 402 (Nuisance)

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

District	Landfill Regulations	Engine/Gas Turbine Regulations	Combustion Contaminants Regulations	Gaseous Fuel Regulations	Fugitive Dust Regulations	Permitting NSR/PSD Regulations	Visible Emissions Regulations	Nuisance Regulations
						Sources of Hazardous Air Pollutants) 7/19/99		
Imperial County Air Pollution Control District			<p>Rule 400 (Fuel Burning Equipment - Oxides of Nitrogen) 9/14/99</p> <p>Rule 405 (Sulfur Compounds Emission Standards) 9/14/99</p>	<p>Rule 405.B.5 (Sulfur Content of Fuels) 9/14/99</p>	<p>Regulation VIII (Fugitive Dust Requirements)</p>	<p>Rule 201 (Permits Required) 9/14/99</p> <p>Rule 207 (New and Modified Stationary Source) 9/14/99</p> <p>Rule 216 (Construction and Reconstruction of Major Stationary Sources that Emit Hazardous Air Pollutants) 6/23/98</p> <p>Regulation IX (Title V) 4/4/00</p>	<p>Rule 401 (Opacity of Emissions) 9/14/99</p>	<p>Rule 407 (Nuisances) 9/14/99</p>

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
Kern County Air Pollution Control District	Rule 422.1 (Municipal Solid Waste Landfills - Non-methane Organic Compounds) 01/08/98	Rule 425 (Cogeneration Gas Turbine Engines) 8/16/93  Rule 427 (Stationary Piston Engines - Oxides of Nitrogen) 5/04/00	Rule 407 (Sulfur Compounds) 5/89  Rule 407.2 (Fuel Burning Equipment – Combustion Contaminants) 4/18/72		Rule 402 (Fugitive Dust) 9/07/95	Rule 201 (Permits Required) 5/2/96  Rule 201.1 (Permits to Operate for Sources Subject to Title V) 1/9/97  Rule 210.1 (New and Modified Stationary Source Review) 5/4/00  Rule 210.4 (Prevention of Significant Deterioration) 9/2/99	Rule 401 (Visible Emissions) 11/29/93	Rule 419 (Nuisance) 5/89
Lake County Air Quality Management District	Chapter II, Article IV, Section 441 (Performance Standards For Existing Municipal Solid Waste Landfills) 11/22/76		Chapter II, Article II, Section 410 (Particulate Matter Emissions) 11/22/76			Chapter IV (Permits)  Article I (Authority to Construct)  Article II (Permit to	Chapter II (Prohibitions and Standards Article I Visible Emissions) 11/22/76	Chapter II, Article IV, Section 430 (Other Emissions or Contaminants) 11/22/76

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

District	Landfill Regulations	Engine/Gas Turbine Regulations	Combustion Contaminants Regulations	Gaseous Fuel Regulations	Fugitive Dust Regulations	Permitting NSR/PSD Regulations	Visible Emissions Regulations	Nuisance Regulations
						Operate)  Chapter XII (Title V)		
Lassen County Air Pollution Control District			Rule 4:4 (Specific Air Contaminants)	Rule 4:10 (Sulfur Content of Fuels)	Rule 4:18 (Fugitive Dust Emissions)	Regulation II (Permits)  Regulation VI (New Source Siting)  Regulation VII (Title V)	Rule 4:0 (Ringelmann Chart)	Rule 4:2 (Nuisance)
Mariposa County Air Pollution Control District			Rule 210 (Specific Contaminants) 3/81			Regulation IV (Authority to Construct Regulations) 3/81  Regulation X (Additional Procedures for Issuing Permits to Operate for Sources Subject to Title V) 2/95	Rule 202 (Visible Emissions) 3/81	Rule 205 (Nuisance) 3/81

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

District	Landfill Regulations	Engine/Gas Turbine Regulations	Combustion Contaminants Regulations	Gaseous Fuel Regulations	Fugitive Dust Regulations	Permitting NSR/PSD Regulations	Visible Emissions Regulations	Nuisance Regulations
Mendocino County Air Quality Management District			Rule 440 (Sulfur Oxide Emissions)		Rule 430 (Fugitive Dust Emissions)	Rule 200 (Permit Requirements)  Rule 220 (New Source Review Standards)  Regulation 5 (Procedures for Issuing Permits to Operate for Sources Subject to Title V)	Rule 410 (Visible Emissions)	Rule 400 (a) (Public Nuisance)
Modoc County Air Pollution Control District			Rule 4.4 (Specific Air Contaminants) 01/15/89			Rule 2.1 (Permits Required) 11/15/93  Rule 2.13 (Permitting Title V Sources) 11/15/93  Regulation VI (New Source Siting) 1/15/89	Rule 4.1 (Visible Emissions) 01/15/89	Rule 4.2 (Nuisance) 01/15/89

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
Mojave Desert Air Quality Management District	Rule 1126 (Municipal Solid Waste Landfills) 8/28/00	Rule 1159 (Stationary Gas Turbines) 02/22/95  Rule 1160 (Internal Combustion Engines) 10/26/94	Rule 406 (Specific Contaminants) 02/20/79  Rule 407 (Liquid and Gaseous Air Contaminants) 5/6/76  Rule 409 (Combustion Contaminants) 5/7/76  Rule 474 (Fuel Burning Equipment) 8/25/97  Rule 67 (Fuel Burning Equipment) 9/10/74	Rule 431 (Sulfur Content of Fuels) 7/25/77	Rule 403 (Fugitive Dust) 7/25/77	Regulation II (Permits)  Regulation XII (Federal Operating Permits) 12/21/94  Regulation XIII (New Source Review) 3/25/96	Rule 401 (Visible Emissions) 7/25/77	Rule 402 (Nuisance) 7/25/77

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
Monterey Bay Unified Air Pollution Control District	<p>Rule 437 (Municipal Solid Waste Landfills) 10/16/96</p> <p>Rule 1001 (Solid Waste Disposal Sites) 12/16/87</p>		<p>Rule 404 (Sulfur Compounds and Nitrogen Oxides) 3/22/00</p>	<p>Rule 412 (Sulfur Content Of Fuels) 9/1/74</p>		<p>Rule 200 (Permits Required) 12/12/00</p> <p>Rule 207 (Review of New or Modified Sources) 12/13/00</p> <p>Rule 218 (Title V: Federal Operating Permits) 3/26/97</p> <p>Rule 1000 (Permit Guidelines and Requirements for Sources Emitting Toxic Air Contaminants) 6/17/98</p>	<p>Rule 400 (Visible Emissions) 3/22/00</p>	<p>Rule 402 (Nuisances) 3/22/00</p>

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
North Coast Unified Air Quality Management District			Rule 440 (Sulfur Oxide Emissions)		Rule 430 (Fugitive Dust Emissions) 5/12/76	Rule 200 (Permit Requirements)  Rule 220 (New Source Review)  Rule 240 (Permit to Operate)  Regulation 5 (Procedures for Issuing Permits to Operate for Sources Subject to Title V) 11/21/94	Rule 410 (Visible Emissions) 5/12/76	
Northern Sierra Air Quality Management District			Rule 210 (Specific Contaminants) 10/19/91		Rule 226 (Dust Control) 5/11/94	Regulation IV (Authority to Construct Regulations) 5/11/94  Regulation V (Permit to Operate Regulations) 5/11/94	Rule 202 (Visible Emissions) 10/19/91	Rule 205 (Nuisance) 10/19/91



**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
Northern Sonoma County Air Pollution Control District			Rule 440 (Sulfur Oxide Emissions)		Rule 1- 430 (Fugitive Dust Emissions)	Rule 1-200 (Permit Requirements)  Rule 1-220 (New Source Review Requirements)  1-225 (Toxics Review Standards)  Regulation 5 (Procedures for Issuing Permits to Operate for Sources Subject to Title V of the Federal Clean Air Act Amendments of 1990)	Rule 1-410 (Visible Emissions)	

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
Placer County Air Pollution Control District	Rule 237 (Municipal Landfills) 8/14/97	Rule 250 (Stationary Gas Turbines) 10/17/94	Rule 210 (Specific Contaminants) 10/19/93		Rule 228 (Fugitive Dust – Lake Tahoe Air Basin) 10/19/93	Rule 501 (General Permit Requirements)  Rule 502 (New Source Review)  Rule 507 (Federal Operating Permit Program)  Rule 513 (Toxic New Source Review)	Rule 202 (Visible Emissions) 5/20/85	Rule 205 (Nuisance) 5/24/77

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
Sacramento Metropolitan Air Quality Management District	Rule 485 (Municipal Landfill Gas) 7/23/98	Rule 412 (Stationary Internal Combustion Engines Located at Major Stationary Sources of NOx) 6/01/95  Rule 413 (Stationary Gas Turbines) 5/01/97	Rule 406 (Specific Contaminants) 12/6/78	Rule 420 (Sulfur Content of Fuels) 8/13/81	Rule 403 (Fugitive Dust) 8/3/77	Rule 201 (General Permit Requirements) 6/7/94  Rule 202 (New Source Review) 4/4/96  Rule 203 (Prevention of Significant Deterioration) 2/26/91  Rule 207 (Title V – Federal Operating Permit Program) 12/04/97	Rule 401 (Ringelmann Chart) 4/19/83	Rule 402 (Nuisance) 8/3/77

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
San Diego County Air Pollution Control District	<p>Rule 59 (Control of Waste Disposal Site Emissions) 11/3/87</p> <p>Rule 59.1 (Municipal Solid Waste Landfills) 6/17/98</p>	<p>Rule 69.3 (Stationary Gas Turbine Engines RACT) 12/16/98</p> <p>Rule 69.3.1 (Stationary Gas Turbine Engines BARCT) 12/16/98</p> <p>Rule 69.4 (Stationary Reciprocating Internal Combustion Engines – RACT) 11/15/00</p> <p>Rule 69.4.1 (Stationary Reciprocating Internal Combustion Engines – Best Available Retrofit Control Technology) 11/15/00</p>	<p>Rule 53 (Specific Air Contaminants) 1/22/97</p>	<p>Rule 62 (Sulfur Content of Fuels) 10/21/81</p>		<p>Rule 10 (Permits Required) 7/25/95</p> <p>Rule 20.1 (new Source Review – General Provisions) 12/17/98</p> <p>Rule 20.3 (New Source Review – Major Stationary Sources and PSD Stationary Sources) 12/17/98</p> <p>Rule 1200 (Toxic Air Contaminants – New Source Review) 6/12/96</p> <p>Regulation XIV (Title V Operating Permits) 3/6/96</p>	<p>Rule 50 (Visible Emissions) 6/17/98</p>	<p>Rule 51 (Nuisance)</p>

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
San Joaquin Valley Unified Air Pollution Control District	Rule 4642 (Solid Waste Disposal Sites) 4/16/98	Rule 4701 (Internal Combustion Engines) 11/12/98  Rule 4703 (Stationary Gas Turbines) 10/16/97	Rule 4301 (Fuel Burning Equipment Amended) 12/17/92  Rule 4801 (Sulfur Compounds) 12/17/92			Rule 2010 (Permits Required) 12/17/92  Rule 2201 (New and Modified Stationary Source Review) 6/15/95  Rule 2520 (Federally Mandated Operating Permits) 3/17/94	Rule 4101 (Visible Emissions) 12/17/92	Rule 4102 (Nuisance) 12/17/92
San Luis Obispo County Air Pollution Control District	Rule 426 – (Landfill Gas Emissions) 7/26/95)	Rule 431 – (Stationary Internal Combustion Engines) 11/13/96	Rule 404.A (Sulfur Compounds Emission Standards) 12/6/76  Rule 405 (Nitrogen Oxides Emission Standards) 11/16/93  Rule 406 (Carbon Monoxide	Rule 404.E (Sulfur Compounds Emission Standards) 12/6/76		Rule 202 (Permits) 11/5/91  Rule 204 (Requirements) 8/10/93  Rule 216 (Federal Part 70 Permits) 10/26/93  Rule 219 (Toxic New Source Review) 3/24/99	Rule 401 (Visible Emissions) 8/2/76	Rule 402 – (Nuisance) 8/2/76

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

District	Landfill Regulations	Engine/Gas Turbine Regulations	Combustion Contaminants Regulations	Gaseous Fuel Regulations	Fugitive Dust Regulations	Permitting NSR/PSD Regulations	Visible Emissions Regulations	Nuisance Regulations
			Emission Standards) 11/23/84					
Santa Barbara County Air Pollution Control District	Rule 341 (Municipal Solid Waste Landfills) 9/18/97	Rule 333 (Control of Emissions From Recipients of Internal Combustion Engines) 4/17/97	Rule 309 (Specific Contaminants) 10/23/78	Rule 311 (Sulfur Content of Fuels) 10/23/78		Rule 201 (Permits Required) 4/17/97  Rule 206 (Conditional Approval of Authority to Construct or Permit to Construct) 10/15/91  Rule 801 (New Source Review) 4/17/97  Rule 803 (Prevention of Significant Deterioration) 4/17/97  Regulation XII (Part 70 Operating Permit Program) 9/18/97	Rule 302 (Visible Emissions) 6/81	Rule 303 (Nuisance) 10/23/78

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
Shasta County Air Quality Management District	Rule 3:29 (Municipal Solid Waste Landfills) 4/1/97	Rule 3:28 (Stationary Internal Combustion Engines) 4/1/97	Rule 3:2 (Specific Air Contaminants) 7/22/86		Rule 3:16 (Fugitive, Indirect, or Non-Traditional Sources) 7/22/86	Rule 2:1 (New Source Review and Prevention of Significant Deterioration) 6/24/97  Rule V (Title V) 12/5/95	Rule 3:2 (Specific Air Contaminants) 7/22/86	
Siskiyou County Air Pollution Control District			Rule 4.4 (Specific Air Contaminants) 7/11/89			Rule 2.1 (Permits Required) 7/11/89  Rule 2.13 (Additional Procedures for Issuing Permits to Operate for Sources Subject to Title V of the Federal Clean Air Act Amendment of 1990) 11/15/93  Rule 6.1 (Construction Permit Standards for Criteria Pollutants)	Rule 4.1 (Visible Emissions) 7/11/84	Rule 4.2 (Nuisance) 7/11/89

**Table 3****Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
						6/23/99  Rule 6.2 (Standards for Permits to Operate) 1/24/89  Rule 6.4 (Construction Permit Standards for Hazardous Air Pollutants) 6/23/99		



**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

District	Landfill Regulations	Engine/Gas Turbine Regulations	Combustion Contaminants Regulations	Gaseous Fuel Regulations	Fugitive Dust Regulations	Permitting NSR/PSD Regulations	Visible Emissions Regulations	Nuisance Regulations
South Coast Air Quality Management District	<p>Rule 1150 (Excavation of Landfill Sites) 10/15/82</p> <p>Rule 1150.1 (Control Of Gaseous Emissions From Municipal Solid Waste Landfills) 3/17/00</p>	<p>Rule 1110-1 (Emissions from Stationary Internal Combustion Engines) 10/4/85</p> <p>Rule 1110.2 (Emissions from Gaseous – and Liquid-fueled Internal Combustion Engines) 11/14/97</p> <p>Rule 1134 (Emissions of Oxides of Nitrogen from Stationary Gas Turbines) 8/8/97</p>	<p>Rule 407 (Liquid and Gaseous Air Contaminants) 4/2/82</p> <p>Rule 409. (Combustion Contaminants) 8/7/81</p>	<p>Rule 431.1. (Sulfur Content Of Gaseous Fuels) 6/12/98</p> <p>B-29</p>	<p>Rule 403 (Fugitive Dust) 12/11/98</p> <p>Rule 403.1 (Wind Entrainment of Fugitive Dust) 6/16/00</p>	<p>Regulation II (Permits) 11/17/00</p> <p>Regulation XIII (New Source Review) 10/20/00</p> <p>Regulation XVII (Prevention of Significant Deterioration) 1/6/89</p> <p>Regulation XX (Regional Clean Air Incentives Market) 10/20/00 landfill gas control, processing, or energy recovery facilities are exempt</p> <p>Regulation XXX (Title V Permits) 11/14/97</p>	<p>Rule 401 (Visible Emissions) 9/11/98</p>	<p>Rule 402 (Nuisance) 5/7/76</p>

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
Tehama County Air Pollution Control District	Rule 4:33 (Municipal Solid Waste Landfills) 06/03/97	Rule 4:34 (Stationary Internal Combustion Engines) 06/03/97	Rule 4:9 (Specific Contaminants) 9/10/85  Rule 4.14 (Fuel Burning Equipment)		4:24 (Fugitive, Indirect, or Non-Traditional Sources) 8/04/87	Rule 2:2 (Permits Required) 1/10/73  Rule 2:3 (Registration or Permit to Operate) 4/21/98  Rule 2:3A (New Source Review) 6/29/99  Regulation VII (Title V) 2/1/94	Rule 4:1 (Visible Emissions) 1/10/73	Rule 4:4 (Nuisance) 1/10/73
Tuolumne County Air Pollution Control District			Rule 210 (Specific Contaminants)			Regulation IV (Authority to Construct) 6/29/99  Regulation V (Permit to Operate) 2/28/95	Rule 202 (Visible Emissions)	Rule 205 (Nuisance)

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
Ventura County Air Pollution Control District	Rule 74.17.1 (Municipal Solid Waste Landfills) 2/9/99	Rule 74.9 (Stationary Internal Combustion Engines) 12/21/93  Rule 74.23 (Stationary Gas Turbines) 10/10/95	Rule 54 (Sulfur Compounds) 6/14/94  Rule 57 (Combustion Contaminants – Specific) 6/14/77	Rule 64 (Sulfur Content of Fuels) 4/13/99		Rule 10 (Permits Required) 6/13/95  Rule 26 (New Source Review) 1/13/98  Rule 26.10 (New Source Review – PSD) 1/13/98  Rule 33 (Part 70 Permits) 10/12/93	Rule 50 (Opacity) 2/20/79	Rule 51 (Nuisance) 10/22/68

**Table 3**  
**Summary of District Air Quality Regulations Applicable to Municipal Solid Waste Landfills**

<b>District</b>	<b>Landfill Regulations</b>	<b>Engine/Gas Turbine Regulations</b>	<b>Combustion Contaminants Regulations</b>	<b>Gaseous Fuel Regulations</b>	<b>Fugitive Dust Regulations</b>	<b>Permitting NSR/PSD Regulations</b>	<b>Visible Emissions Regulations</b>	<b>Nuisance Regulations</b>
Yolo-Solano Air Quality Management District	Rule 2.38 (Municipal Solid Waste Landfills) 3/12/97	Rule 2.32 (Stationary Internal Combustion Engines) 8/10/94  Rule 2.34 (Stationary Gas Turbines) 7/13/94	Rule 2.12 (Specific Contaminants)  Rule 2.16 (Fuel Burning Heat or Power Generators)			Rule 3.4 (New Source Review) 8/13/97  Rule 3.8 (Federal Operating Permits) 1/26/94  Rule 3.13 (Toxics New Source Review) 6/9/99	Rule 2.3. (Ringelmann Chart)	Rule 2.5 (Nuisance)

<b>Comparison of Air Rules Applicable to Landfills in Two Districts (General Landfill Regulations)</b>		
<b>Requirements</b>	<b>Shasta County</b>	<b>South Coast</b>
Rule Number - Title	Rule 3:29 - Municipal Solid Waste Landfills (this rule adopts the requirements of 40 CFR 60, Subpart WWW)	Rule 1150.1 - Control of Gaseous Emissions From Municipal Solid Waste Landfills
Purpose	Limit non-methane organic compounds (NMOC) emissions by installing a landfill gas collection and control system. [3:29 A.]	Limit Municipal Solid Waste (MSW) landfill emissions to prevent public nuisance and possible detriment to public health. [1150.1(a)]
Applicability Trigger	Landfill design capacity $\geq 2.5 \times 10^9$ kg or $\geq 2.5 \times 10^6$ cu m <u>and</u> NMOC emissions $\geq 50 \times 10^6$ g/yr. [3:29 E.1.]	Rule applies to each active and inactive landfill. [1150.1(b)]
Compliance Plan Schedule	Submit plan within 1 year after determining that NMOC emission rate is $\geq 50 \times 10^6$ g/yr. [3:29 G.2.]	Submit site-specific collection and control system design plan with applications for permits to construct or permits to operate for landfill activities. [1150.1(d)]
Compliance Deadline	Install system within 30 months after first annual report in which NMOC $\geq 50 \times 10^6$ g/yr. [3:29 G.3.]	Install and operate collection and control system no later than 18 months after submittal of design plan. [1150.1(d)]
Performance Requirements	Collect landfill gas and route to control system with 98% by weight NMOC reduction or reduce outlet NMOC concentration to $< 20$ ppmv as hexane at 3% O <sub>2</sub> ; or process collected gas for sale or use. [3:29 E.2.] [40 CFR 60.752] Operate landfill gas collection system to prevent landfill surface methane concentrations from exceeding 500 ppmv. [40 CFR 60.753]	Collect landfill gas and route to control system designed and operated to reduce NMOC by at least 98% by weight or reduce outlet NMOC concentration to $< 20$ ppmv as hexane at 3% O <sub>2</sub> ; or process collected gas for subsequent sale or use. Operate landfill gas collection system to prevent concentration of TOC (total organic compounds) measured as methane from exceeding specified limits: 5% vol in subsurface sampling probes; 50 ppmv determined by integrated samples; and 500 ppmv determined by instantaneous

<b>Comparison of Air Rules Applicable to Landfills in Two Districts (General Landfill Regulations)</b>		
<b>Requirements</b>	<b>Shasta County</b>	<b>South Coast</b>
		monitoring at any location on landfill surface. [1150.1(d)]
Testing Requirements	Conduct initial performance test of landfill gas control system within 6 months of startup of system. [3:29 G.4.]	Conduct initial source test of landfill gas control system within 60 days after achieving maximum production rate at which facility will be operated, but not later than 180 days after initial startup. [1150.1(d)]
Monitoring Requirements	Monitor pressure, temperature, nitrogen or oxygen content of landfill gas. Monitor exhaust temperature and landfill gas flow of control device. Monitor landfill surface methane concentrations. [40 CFR 60.756]	Monitor TOC and TAC concentrations in landfill gas. Monitor the exhaust temperature and landfill gas flow of control device. Install and operate subsurface probes along landfill boundary. Perform integrated and instantaneous landfill surface monitoring. [1150.1(e)]
Recordkeeping Requirements	Emissions, quantity of waste-in-place, waste acceptance rate. [3:29 F.] [40 CFR 60.758]	Maintain for at least 5 years all data, including control system vendor specifications, landfill gas flow rates, average combustion temperatures, location and concentration of landfill gas samples, periods of operation of boilers, and process heaters. [1150.1(f)]
Reporting Requirements	Initial design capacity report. [3:29 E.2.] NMOC emission rate report initially and annually. 5-year estimates of waste-in-place and waste acceptance rate. Closure report within 30 days of ceasing waste acceptance. [3:29 F.] [40 CFR 60.757]	Initial source test report within 180 days after startup, annual source test report no later than 45 days after anniversary date of initial source test. Quarterly reports of exceedances of emissions standards no later than 45 days after last day of each calendar quarter. Closure report no later than 30 days after ceasing waste acceptance. Decommissioning report 30 days before well capping or removal or cessation of operation of collection or control equipment. [1150.1(f)]

## Comparison of Air Rules Applicable to Landfills in Two Districts (Internal Combustion Reciprocating Engine Regulations)

Requirements		Shasta County	South Coast																								
Rule Number - Title	Rule 3:28 - Stationary Internal Combustion Engines		Rule 1110.2 - Emissions From Gaseous- and Liquid-Fueled Internal Combustion Engines																								
Purpose	To limit emissions of NOx and CO from stationary reciprocating internal combustion (IC) engines. [3:28 A.]		To reduce emissions of NOx, VOCs, and CO from stationary and portable reciprocating internal combustion (IC) engines. [1110.2(a)]																								
Applicability Trigger	Any gaseous, Diesel, or other liquid-fueled stationary IC engine rated at >50 bhp. [3:28 C.]		All stationary and portable engines rated at >50 bhp. [1110.2(b)]																								
Compliance Deadline	The final compliance deadline is 1/01/99. [3:28 H.]		The final compliance deadline is 12/31/04 for stationary engines and 12/31/09 for portable engines. [1110.2(e)]																								
Emission Limits	<p>NOx and CO emissions limits (ppmv @ 15% O<sub>2</sub>) depend on power rating, fuel type, and air-fuel ratio.</p> <p>Engines rated at &gt;50 bhp and #300 bhp:</p> <table><tr><td>Type</td><td>NOx, ppmv</td><td>CO, ppmv</td></tr><tr><td>Rich Burn</td><td>640</td><td>4500</td></tr><tr><td>Lean Burn</td><td>740</td><td>4500</td></tr><tr><td>Diesel/Liquid Fuel</td><td>600</td><td>4500</td></tr></table> <p>Engines rated at &gt;300 bhp:</p> <table><tr><td>Type</td><td>NOx, ppmv</td><td>CO, ppmv</td></tr><tr><td>Rich Burn</td><td>90</td><td>4500</td></tr><tr><td>Lean Burn</td><td>150</td><td>4500</td></tr><tr><td>Diesel/Liquid Fuel</td><td>600</td><td>4500</td></tr></table>		Type	NOx, ppmv	CO, ppmv	Rich Burn	640	4500	Lean Burn	740	4500	Diesel/Liquid Fuel	600	4500	Type	NOx, ppmv	CO, ppmv	Rich Burn	90	4500	Lean Burn	150	4500	Diesel/Liquid Fuel	600	4500	<p>Remove stationary engines from service, or replace engines with electric motors, or reduce emissions to specified levels.</p> <p>With the exception of the following engines, all engines must comply with: 36 ppm NOx, 250 ppm VOC as methane, 2000 ppm CO, all values are corrected to 15% O<sub>2</sub>.</p> <p>Stationary engines used for electric power generation, landfill gas fired, digester gas fired, water pump, oil fired, gas fired, LPG fired, and compressors operating less than 4,000 hrs/year.</p> <p>Stationary engines of 50 hp to 500 hp - 2000 ppm CO, NOx, and VOC ppm values of 45 and 250 ppmv, respectively, corrected by full-load efficiency factor or actual heat input rate, all values are corrected to 15% O<sub>2</sub>.</p>
Type	NOx, ppmv	CO, ppmv																									
Rich Burn	640	4500																									
Lean Burn	740	4500																									
Diesel/Liquid Fuel	600	4500																									
Type	NOx, ppmv	CO, ppmv																									
Rich Burn	90	4500																									
Lean Burn	150	4500																									
Diesel/Liquid Fuel	600	4500																									

## Comparison of Air Rules Applicable to Landfills in Two Districts (Internal Combustion Reciprocating Engine Regulations)

Requirements	Shasta County	South Coast
		<p>Stationary engines greater than 500 hp - 2000 ppm CO, NOx, and VOC ppm values of 36 and 250 ppmv, respectively, corrected by full-load efficiency factor or actual heat input rate, all values are corrected to 15% O<sub>2</sub>.</p> <p>Portable spark ignition engines: 176 ppm CO, 80 ppm NOx, 240 ppm VOC, all values are corrected to 15% O<sub>2</sub>.</p> <p>Portable compression-ignition engines: 770 ppm NOx (50 hp to less than 117 hp), 550 ppm NOx (117 hp to less than 400 hp), 535 ppm NOx (greater than 400 hp), all values are corrected to 15% O<sub>2</sub>.</p>
Testing Requirements	Conduct initial emissions test (NOx, CO, oxygen). Conduct annual emissions tests with portable analyzer. [3:28 G.]	Conduct source test for NOx, VOC, and CO at least once every 3 years. [1110.2(f)]
Monitoring Requirements	Monitor engine operating time, type, and amount of fuel consumed. [3:28 F.]	Monitor engine operating time, type, and amount of fuel consumed. For engines rated ≥1000 bhp, install and operate NOx CEMS or approved alternative device. [1110.2(f)]
Recordkeeping Requirements	Maintain for two years operating log showing hours of operation, type, and amount of fuel burned, maintenance, initial and annual emission test results. [3:28 F.]	Maintain CEMS data for at least two years, maintain engine operating log of total hours of operation, fuel consumption, cumulative hours of operation since last source test. [1110.2(f)]
Reporting Requirements	Provide to APCO engine and emission control specifications. Submit to APCO on request engine operating log. [3:28 F.]	Make engine operating log and CEMS data available for inspection by District; provide source test data to District. [1110.2(f)]



Comparison of Air Rules Applicable to Landfills in Two Districts (Gas Turbine Regulations)			
Requirements		Shasta County	South Coast
Rule Number - Title	Since there is no District gas turbine regulation, the requirements of 40 CFR 60, Subpart GG apply.	Rule 1134 - Emissions of Oxides of Nitrogen from Stationary Gas Turbines	
Engines Covered by Rule	All stationary gas turbines that commenced construction, modification, or reconstruction after October 3, 1997	All existing stationary gas turbines as of August 4, 1989 (and installed subsequently). [1134(a)]	
Applicability Trigger	Turbines with a heat input equal to or greater than 10.7 gigajoules per hour.	Turbines rated 0.3 MW and larger. [1134(a)]	
Compliance Deadline	Initial compliance test within 180 days of startup of unit	Compliance deadline of 12/31/95 for all gas turbines with the exception of 2.9 to 10 MW units burning a minimum of 60% sewage digester gas by volume on a daily basis. For these units the compliance deadline is 4/11/97. [1134(c)]	
Emission Limits	NOx limit (ppm @ 15% O2) = 0.0075 x (14.4/Y) x F  Where: Y = heat rate of turbine F = fuel bound nitrogen content  SOx limit = 0.015% vol. @ 15% O2 or shall not burn fuel with a sulfur content in excess of 0.8% wt.	Gas turbine NOx limits based on MW rating, rated efficiency. Compliance Limit = Reference Limit H (EFF/25%), where EFF is manufacturer=s rated efficiency or is based on actual heat rate, and Reference Limits are as follows: [1134(c)]	
		MW Rating	Reference Limit (NOx ppm)
		0.3 to <2.9	25
		2.9 to <10.0	9
		2.9 to <10.0, No SCR	15

<b>Comparison of Air Rules Applicable to Landfills in Two Districts (Gas Turbine Regulations)</b>			
<b>Requirements</b>	<b>Shasta County</b>	<b>South Coast</b>	
		10.0 and Over	9
		10.0 and Over, No SCR	12
		60 and Over Combined Cycle, No SCR	15
		60 and Over Combined Cycle	9
Testing Requirements	Conduct initial source test for NO <sub>x</sub> within 180 days of startup.	Conduct source test for NO <sub>x</sub> , efficiency, CO, and oxygen. Frequency of source testing depends on annual NO <sub>x</sub> emissions. [1134(d)]	
Monitoring Requirements	Continuous monitoring of water injection rate, fuel flow rate, and water to fuel ratio (if water injection used for NO <sub>x</sub> control)  Daily testing of fuel sulfur content unless an alternative test schedule is approved by the EPA	For gas turbines rated $\geq 2.9$ MW, install and operate NO <sub>x</sub> and O <sub>2</sub> CEMS, including fuel flow rate, turbine operating time, and water-fuel ratio if water used for NO <sub>x</sub> control. [1134(d)]	
Recordkeeping Requirements	Maintain all records for 5 years.	Maintain all records for 2 years, maintain gas turbine operating log including operating times, fuel used, CEMS operation and maintenance. [1134(f)]	
Reporting Requirements	Quarterly compliance reports to the EPA.	Make available to District staff upon request all records. Submit monthly summary of emissions based on CEMS operation on or before last day of following calendar month. [1134(f)]	

<b>Comparison of Air Rules Applicable to Landfills in Two Districts (Combustion Contaminant Regulations)</b>		
<b>Requirements</b>	<b>Shasta County</b>	<b>South Coast</b>
Rule Number - Title	Rule 3:2 - Specific Air Contaminants	Rule 407 - Liquid and Gaseous Air Contaminants Rule 409 - Combustion Contaminant
Purpose	Prevent discharge of contaminants (particulate matter) in amounts greater than designated. [3:2]	
Applicability	Any single source. [3:2]	Any equipment, except stationary IC engines, propulsion of mobile equipment, and emergency venting. [407(b)]
Emission Limits	Maximum emission limited to 0.10 gr/dscf combustion PM, 0.05 gr/dscf PM <sub>10</sub> , 0.15 gr/dscf all other PM, all values referenced to 12% CO <sub>2</sub> . [3:2 Table 1]	Prohibits discharge into the atmosphere from any equipment CO exceeding 2,000 ppmvd, 15-minute average. [407(a)] Prohibits discharge into the atmosphere, from the burning of fuel, combustion contaminants (PM) exceeding 0.1 gr/dscf, at 12% CO <sub>2</sub> , averaged over 15 minutes. [409]

<b>Comparison of Air Rules Applicable to Landfills in Two Districts (Gaseous Fuel Regulations)</b>		
Requirements		
	Shasta County	South Coast
Rule Number - Title	No Regulation	Rule 431.1 - Sulfur Content of Gaseous Fuels
Purpose		To reduce sulfur oxides emissions from the burning of gaseous fuels in stationary equipment requiring a Permit To Operate. [431.1(a)]
Applicability Trigger		Facility sulfur compound emissions $\geq$ 5 lbs/day as H <sub>2</sub> S from burning gaseous fuels other than natural gas. [431.1(g)]
Requirements		Do not burn in equipment requiring Permit To Operate, transfer, sell, or offer for sale for use in District any landfill gas containing more than 150 ppmv sulfur compounds calculated as H <sub>2</sub> S, averaged daily. [431.1(c)]
Monitoring Requirements		Continuously monitor either fuel gas sulfur content as H <sub>2</sub> S or SO <sub>x</sub> emissions, or use an approved alternative monitoring method. [431.1(d)]
Compliance Deadline		If previously exempt or in compliance, submit within 30 days from time of noncompliance a plan to demonstrate compliance; submit application for fuel gas control system within 6 months of time of exceedance of 5 lbs per day total sulfur as H <sub>2</sub> S; demonstrate compliance with 150 ppmv within 18 months after the time of the exceedance. [431.1(c)]
Recordkeeping Requirements		Maintain for at least two years records of monthly fuel consumption, daily average sulfur content, total SO <sub>x</sub> emissions, and continuous monitor

Comparison of Air Rules Applicable to Landfills in Two Districts (Gaseous Fuel Regulations)		
Requirements	Shasta County	South Coast
		breakdown. [431.1(e)]
Reporting Requirements		Submit annual reports of monthly fuel consumption and total sulfur content of fuel consumed, no later than 60 days following end of reporting year. Include monthly fuel consumption, daily average sulfur content, and total SOx emissions as SO <sub>2</sub> . [431.1(e)]

Comparison of Air Rules Applicable to Landfills in Two Districts (Fugitive Dust Regulations)			
Requirements		Shasta County	South Coast
Rule Number - Title	Rule 3:16 - Fugitive, Indirect, or Non-Traditional Sources	Rule 403 - Fugitive Dust Rule 403.1 - Wind Entrainment of Fugitive Dust	
Purpose	Mitigate emissions to below a level of significance or to a point where emissions do not constitute a violation of California Health & Safety Code 41700 or 41701. [3:16]	Reduce the amount of particulate matter in ambient air as a result of man-made fugitive dust. [403(a)] Prevent or reduce the amount of PM <sub>10</sub> entrained in ambient air by high winds acting on man-made fugitive dust sources. [403.1(a)]	
Applicability	Fugitive sources, indirect sources, non-traditional sources. [3:16]	Any activity or man-made condition capable of generating fugitive dust. [403(b)] Only in the Coachella Valley, to activity or man-made condition capable of generating fugitive dust, except unpaved road dust, when wind speeds exceed 25 mph. [403.1(b)]	
Requirements	No discharge of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to the public, or which endanger the comfort, repose, health, or safety, or which cause injury or damage to business or property. [H&SC 41700]	Utilize BACT to minimize fugitive dust emissions. Prevent or remove trackout of bulk material onto paved public roadways. [403(d)]	
Compliance Plan		A compliance plan is required for large (more than 100 acres) and medium (50 to 100 acres) operations. The plan must be submitted to the District 30 days prior to the activity. [403(f)]	
Emission Limits	No emissions shall be as dark as or darker than Ringelmann No. 2. [H&SC 41701]	A person shall not cause or allow emissions of fugitive dust from any active operation, open storage pile, disturbed surface area such that dust remains visible in the atmosphere beyond the	

<b>Comparison of Air Rules Applicable to Landfills in Two Districts (Fugitive Dust Regulations)</b>		
Requirements	Shasta County	South Coast
		source property line. PM <sub>10</sub> levels not to exceed 50 µg/m <sup>3</sup> . [403(d)]
Testing Requirements		Simultaneous ambient particulate sampling upwind and downwind of key activity areas and as close to property line as feasible. [403(d)]

<b>Comparison of Air Rules Applicable to Landfills in Two Districts (Permitting Regulations)</b>		
<b>Requirements</b>	<b>Shasta County</b>	<b>South Coast</b>
Rule Number - Title	Rule 2:1 A - Permits Required	Rule 201 - Permit to Construct Rule 202 - Temporary Permit to Operate
Applicability	Any building, machine, or equipment the use of which may cause issuance of air contaminants. [2:1.A.a]	Any equipment the use of which may cause issuance of air contaminants, or eliminate, reduce, or control air contaminants. [201, 202]
Requirements	Authority to construct must be obtained before building, erecting, altering, or replacing any article, machine, equipment, or other contrivance the use of which may cause issuance of air contaminants. [2:1A a.] Permit to operate must be obtained before any article, machine, equipment, or other contrivance the use of which may cause the issuance of air contaminants. [2:1A b.]	Obtain written permit to construct. [201] Obtain written permit to operate. [202]
Emission Thresholds		



<b>Comparison of Air Rules Applicable to Landfills in Two Districts (New Source Review Regulations)</b>		
<b>Requirements</b>	<b>Shasta County</b>	<b>South Coast</b>
Rule Number - Title	Rule 2:1 - New Source Review and Prevention of Significant Deterioration (this rule is the SIP approved version of the 40 CFR 51.165 regulations)	Regulation XIII - New Source Review (this rule is the SIP approved version of the 40 CFR 51.165 regulations)
Purpose	Establish preconstruction review requirements for new and modified stationary sources for use of BACT, analysis of air quality impacts, and to ensure that operation of such sources does not interfere with attainment of ambient air quality standards. [2:1 101]	To ensure that operation of new, modified, or relocated facilities does not interfere with progress in attainment of NAAQS and that future economic growth within SCAQMD is not unnecessarily restricted. [1301(a)]
Applicability	All new and modified stationary sources that are subject to permit requirements and after construction emit affected pollutants. [2:1 102]	Installation of new source or modification of existing source that may cause issuance of any nonattainment air contaminant. Non-road or portable IC engines subject to EPA regulations are exempt. [1301(b)]

### Comparison of Air Rules Applicable to Landfills in Two Districts (New Source Review Regulations)

Requirements	Shasta County	South Coast
Requirements	<p>Apply BACT to any new emissions unit or modification that results in emission increase or potential to emit equal to or greater than limits specified below. [2:1 301]</p> <p>Use emission impact analysis to estimate effects of new or modified source; emissions shall not cause or make worse violation of an ambient air quality standard. [2:1 306]</p> <p>BACT triggers for 15 criteria pollutants and TACs. [2:1 301]</p>	<p>BACT to be employed if project results in emission increase. No net emission increase without offsets and modeling of air quality impact. [1303]</p> <p>Exemption from modeling and offset requirements allowed for replacement sources, emergency equipment, air pollution control strategies, emergencies, and portable equipment. Exemption from modeling and offset requirements for portable IC engines and intra-facility portable IC engines meeting emissions limits as shown:</p> <p>VOC: 55 pounds per day, NOx: 55 ppd, SOx: 150 ppd, PM<sub>10</sub>: 150 ppd, CO: 550 ppd; or, for South East Desert Air Basin: VOC: 75 pounds per day, NOx: 100 ppd, SOx: 150 ppd, PM<sub>10</sub>: 150 ppd, CO: 550 ppd. [1304(a), (b)]</p> <p>New facility with potential to emit less than amounts shown shall be exempt from providing offsets: 4 tons per year of VOC, NOx, SOx, and PM<sub>10</sub>, and 29 tpy CO. [1304(d)]</p>

### Comparison of Air Rules Applicable to Landfills in Two Districts (New Source Review Regulations)

Requirements		Shasta County	South Coast
	Pollutant	lbs/day	
	Reactive organic compounds	25.0	
	Nitrogen oxides	25.0	
	Sulfur oxides	80.0	
	Particulate matter (PM <sub>10</sub> )	80.0	
	Carbon monoxide	500.0	
	Lead	3.2	
	Asbestos	0.03	
	Beryllium	0.002	
	Mercury	0.5	
	Vinyl chloride	5.0	
	Fluorides	15.0	
	Sulfuric acid mist	35.0	
	Hydrogen sulfide	50.0	
	Total reduced sulfur compounds	50.0	
	Reduced sulfur compounds	50.0	

### Comparison of Air Rules Applicable to Landfills in Two Districts (New Source Review Regulations)

Requirements	Shasta County	South Coast	
Modeling Limits	Modeled emissions impact shall not cause or make worse the violation of an ambient air quality standard. [2:1 500.]	Substantiate with modeling that new facility or modification will not cause increase in air quality concentration as specified below. [1303 (b)]	
		Air Contaminant	Allowable Change
		NO <sub>x</sub> , 1-hour average	20 µg /m <sup>3</sup>
		NO <sub>x</sub> , Annual Average	1 µg /m <sup>3</sup>
		CO, 1-hour average	1,100 µg /m <sup>3</sup>
		CO, 8-hour average	500 µg /m <sup>3</sup>
		PM <sub>10</sub> , 24-hour average	2.5 µg /m <sup>3</sup>
		PM <sub>10</sub> , Annual Geometric Mean	1 µg /m <sup>3</sup>
		Sulfate, 24-hour Average	1 µg /m <sup>3</sup>

<b>Comparison of Air Rules Applicable to Landfills in Two Districts (PSD Regulations)</b>		
<b>Requirements</b>	<b>Shasta County</b>	<b>South Coast</b>
Rule Number - Title	Rule 2:28 - Prevention of Significant Deterioration (this rule adopts the requirements of 40 CFR 52.21)	Regulation XVII - Prevention of Significant Deterioration (based on this rule, the District was delegated the 40 CFR 52.21 program)
Purpose	Establish preconstruction review requirements for new and modified stationary sources for use of BACT, analysis of air quality impacts, and to ensure that operation of such sources does not interfere with attainment of ambient air quality standards.	To ensure that air quality in clean-air areas does not significantly deteriorate, while maintaining a margin for future industrial growth. [1701(a)]
Applicability	Applies to preconstruction review of stationary sources that emit attainment air contaminants greater than 250 tons/year or 100 tons/year if the facility is one of the 28 source categories identified in the regulation. Also applies to modifications at existing major stationary sources that result in a significant emission increase of attainment air contaminants. The following are the significance levels: CO 100 tons/year, SOx 40 tons/year, NOx 40 tons/year, PM <sub>10</sub> 15 tons/year, VOCs 40 tons/year, hydrogen sulfide 10 tons/year, total reduced sulfur 10 tons/year. [40 CFR 52.21]	Applies to preconstruction review of new major stationary sources that emit attainment air contaminants greater than 250 tons/year or 100 tons/year if the facility is one of the 28 source categories identified in the regulation. Also applies to modifications at existing major stationary sources that result in a significant emission increase of attainment air contaminants. [1701(b)]  The following are the significance levels:  CO 100 tons/year, SOx 40 tons/year, NOx 40 tons/year, PM <sub>10</sub> 15 tons/year, VOCs 40 tons/year, hydrogen sulfide 10 tons/year, total reduced sulfur 10 tons/year. [1702]
Requirements	The subject source shall be constructed using BACT. In addition, the modeled air quality impacts will not cause violation of ambient standards. Continuously monitor ambient air	The subject source shall be constructed using BACT. In addition, the modeled air quality impacts will not cause violation of ambient standards. Continuously monitor ambient air

**Comparison of Air Rules Applicable to Landfills in Two Districts (PSD Regulations)**

	quality in project impact area for one year before submitting permit application. Provide analysis of impairment to visibility, soil, and vegetation. [40 CFR 52.21]	quality in project impact area for one year before submitting permit application. Provide analysis of impairment to visibility, soil, and vegetation. [1703]
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<b>Air Rules Applicable to Landfills (Visible Emissions Regulations)</b>		
Requirements		Shasta County
Requirements		South Coast
Rule Number - Title	Rule 3:2 - Specific Air Contaminants	Rule 401 - Visible Emissions
Requirements	No discharge of contaminants from any single source in amounts greater than Ringelmann No. 2 / 40% opacity [3.2]	Do not discharge into the atmosphere from any single emission source any air contaminant as dark as Ringelmann No. 1 or darker. [401(b)]

<b>Air Rules Applicable to Landfills (Nuisance Regulations)</b>		
<b>Requirements</b>	<b>Shasta County</b>	<b>South Coast</b>
Rule Number - Title	No Regulation	Rule 402 - Nuisance
Requirements		Do not discharge from any source quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to the public, or that endanger the comfort, repose, health, or safety of the public, or that cause or have a natural tendency to cause injury or damage to business or property. [402]



# **APPENDIX C**

## **Summary of State of California Regulations**

Title 27. Division 2. Solid Waste. Subdivision 1. Consolidated Regulations for Treatment, Storage, Processing or Disposal of Waste. Chapter 1. General. Article 1. Purpose, Scope and Applicability of this Subdivision.					
Section	Category	Description			
20060	CIWMB - Applicability of Federal Subtitle D Related Standards to Landfills	MSWLF units that meet the conditions of 40 CFR 258.1(f)(1) and received waste after 10/9/91 and stopped before 10/9/97 are exempt from 40 CFR 257 and 258 requirements except final cover (Section 21140 and other applicable reqts in Chapters 3 and 4). MSWF units that receive 20 tons per day or less municipal solid waste may be allowed alternative daily cover and gas mon. req'ts.			
20080	SWRCB - General Requirements	Unless otherwise specified, alternatives to construction or prescriptive standards contained in the SWRCB-promulgated regulations may be considered. Presents conditions for alternatives.			
Title 27. Division 2. Chapter 3. Criteria for All Waste Management Units, Facilities, and Disposal Sites, Subchapter 2. Siting and Design. Article 2. SWRCB - Waste Classification and Management					
20200	Applicability and Classification Criteria	Dedicated units required for certain wastes; wastes containing free liquids shall not be discharged to Class II landfills; liquids or semi-solid waste shall not be discharged to Class III landfills.			
20210	Designated Waste	Shall be discharged only at Class I waste management units or at pre-approved Class II units.			
20220	Nonhazardous Solid Waste	Defines nonhaz waste and allows classified units to receive it, with some limitations. Requirements for dewatered sludge or water treatment sludge.			
20230	SWRCB - Inert Waste	Inert waste does not need to be discharged at classified Units.			
Title 27. Division 2. Chapter 3. Subchapter 2. Article 3. Waste Management Unit, Facility, or Disposal Site Classification and Siting					
20240	SWRCB - Classification and Siting Criteria	A waste management facility can consist of several Units each with a different classification. Waste to be 5 ft above highest anticipated groundwater. Foundation must be capable of supporting structures and waste.			
		20250. SWRCB - Class II <sup>5</sup> WMUs for Designated Waste		20260. SWRCB - Class III <sup>5</sup> Landfills for Nonhazardous Solid Waste	
		New	Reclassification	New	Reclassification
	Geologic Setting	Substantial isolation from groundwater	As for new Class II	Adequate separation from groundwater; characteristics other than hydraulic conductivity will be considered	As for new Class III
	Flooding	Prevent inundation or washout due to floods with a 100-year return period			
	Ground Rupture	200' setback from known Holocene fault	Exempt <sup>2</sup> except that expansions are as for new Class II	Not located on known Holocene fault	Exempt <sup>2</sup> except that expansion as new Class III
	Tidal Waves <sup>1</sup>	No Siting Restriction <sup>2</sup>			
20270	CIWMB - Location Restrictions: Airport Safety	Requirements to not pose a bird hazard, notify airport and Federal Aviation Administration.			

<b>Title 27. Division 2. Chapter 3. Subchapter 2. Article 4. SWRCB - Waste Management Unit Construction Standards<sup>3</sup></b>			
20310	General Construction Criteria	Class II Units shall be designed and constructed to prevent migration of wastes to adjacent geologic materials. Class III containment structures should prevent degradation of waters of the state.	
20320	General Criteria for Containment Structures	Clay liners to be made of materials of which at least 30 percent passes the No. 200 U.S. Standard Sieve, fine-grained soil with a significant clay content and without organic matter.	
		Class II MSW Landfill	Class III MSW Landfill
	Clay Liner <sup>4</sup>	Special <sup>5</sup> , min. 2 ft thick and at least 90% relative compaction	Special <sup>5</sup> , min. 1 ft thick and at least 90% relative compaction
	Synthetic Liner	Special <sup>5</sup> , min. 40 mils	Special <sup>5</sup> , min. 40 mils
	Leachate Collection and Removal System	Special <sup>5</sup> , required	Special <sup>5</sup> , required if liner or accept water treatment sludge
	Interim Cover	Required	Required
	Cutoff Walls	$1 \times 10^{-6}$ cm/sec <sup>6</sup>	$1 \times 10^{-6}$ cm/sec <sup>6</sup> , if req'd
	Grout Curtains	$1 \times 10^{-6}$ cm/sec	$1 \times 10^{-6}$ cm/sec, if req'd
	Capacity of Precip. & Drainage Control Facilities (Design Storm)	1000-year 24-hour precipitation	100-year 24-hour precipitation
	Seismic Design	Withstand maximum credible earthquake	Withstand maximum probable earthquake
20323	CQA Plan	Construction of all liner and final cover systems to be in accordance with a CQA plan.	
20324	CQA Requirements	Performance standards for professional qualifications, documentation, laboratory testing, materials.	
20330	Liners	Requirements for clay liners, flexible membrane liners, lined area, S.I. with replaceable liner.	
20340	Leachate Collection and Removal Systems	Requirements for design, placement, head buildup, clogging, standard and alternative, leachate handling and production rate.	
20360	Subsurface Barriers	Requirements for cutoff walls or grout curtains, min. 2 ft for clay materials, 40 mils for synthetic materials.	
20365	Precipitation and Drainage Controls	Performance standards to limit ponding, infiltration, inundation, erosion, slope failure, washout, and overtopping.	
20370	Seismic Design	Class II Units to withstand MCE; Class III Units to withstand MPE.	

<b>Title 27. Chapter 3. Subchapter 3. Article 1. SWRCB - Water Quality Monitoring and Response Programs for Solid Waste Management Units</b>		
20380	Applicability	Owners or operators shall detect, characterize, respond to releases to groundwater, surface water, or the unsaturated zone; shall maintain financial assurance for corrective action for known or foreseeable releases from the Unit.
20385	Required Programs	Includes detection monitoring, evaluation monitoring, corrective action.
20390	Water Quality Protection Standard (Water Standard)	Established in the WDRs; consists of constituents of concern, concentration limits, Point of Compliance and all Monitoring Points.
20395	Constituents of Concern	In the WDRs, all waste constituents, reaction products, and hazardous constituents reasonably expected.
20400	Concentration Limits	Req'ts for concentration limits, background, and concentration limits greater than background (CLGB).
20405	Monitoring Points and the Point of Compliance	Defines the Point of Compliance at which the Water Standard applies.
20410	Compliance Period	The active life of the unit plus the closure period; minimum time to conduct water quality monitoring
20415	General Water Quality Monitoring and System Requirements	Presents ground- and surface water monitoring system requirements for DMP, EMP, and CAP, alternate background locations, drillers' logs, sampling and analytical methods, statistical data analysis methods, data collection and analysis.
20420	Detection Monitoring Program (DMP)	Monitoring parameters to meet requirements of SWRCB Resolution No. 93-62, 5-year COC monitoring, release notification and response, monitoring system changed.
20425	Evaluation Monitoring Program (EMP)	Monitoring parameters to meet requirements of SWRCB Resolution No. 93-62, ongoing monitoring, 5-year COC monitoring, data records, report changes.
20430	Corrective Action Program (CAP)	Corrective action program to remediate releases from the Unit and ensure that the discharger achieves compliance with the Water Standard according to monitoring, schedule, and reporting requirements set forth herein.

<sup>1</sup>The term "tidal waves" includes tsunamis, seiches, and surge condition.

<sup>2</sup>Exemption from siting criteria does not release dischargers from the obligation to protect Units from geologic or environmental hazards involved. Exemption is conditions on such protection.

<sup>3</sup>Applicable regulations in this article may provide for exemptions to certain requirements.

<sup>4</sup>All permeabilities specified in this table are maximum allowable permeabilities.

<sup>5</sup>All Class II or Class III landfills that received MSW at any time and that received solid waste after October 9, 1991 (MSW landfills) are subject to the additional state and federal requirements contained (or incorporated by reference) in SWRCB Resolution No. 93-62.

<sup>6</sup>Cutoff walls required where there is potential for lateral movement of fluid, including waste or leachate, and the hydraulic conductivity of natural geologic materials is used for waste containment. Cutoff walls shall be a min. of 2 ft thick for clay or 40 mils for synthetic materials, keyed a minimum of 5 ft into natural geologic material.

<sup>7</sup>The RWQCB establishes a water quality protection standard in the WDRs that consists of the list of constituents of concern, concentration limits, and the Point of Compliance and all Monitoring Points. The Water Standard shall apply during the active life of the Unit, the closure period, the post-closure maintenance period, and during any compliance period (Section 20390, et seq.) General water quality monitoring and system requirements, including data analysis methods, are set forth in Section 20415.

<b>Title 27. Division 2. Chapter 3. Subchapter 4. Article 1. CIWMB - Operating Criteria</b>		
<b>Section</b>	<b>Category</b>	<b>Brief Description</b>
20510	Disposal Site Records	Weights and volumes accepted Excavations that may affect site or off-site safety Daily log book of fires, landslides, earthquake damage, etc. Personnel training Notification to EA, local health agency, fire authority of RP
20515	MSWLF Unit Records	Any location restriction demonstration (req'd under 20270 for airport safety) Inspection records, training procedures, notification procedures Gas monitoring results Closure and postclosure maintenance plans
20517	Documentation of EA Approvals, Determinations, and Requirements	Shall be documented by the operator and placed in the operating unit
20520	Signs	Easily visible sign that indicates facility name and other information Easily visible sign indicating name of site operator, telephone number, hrs of operation Easily visible sign indicating schedule of charges and general types of materials that WILL be accepted and that WILL NOT be accepted If open to public, easily visible signs that direct traffic to areas where materials may be disposed
20530	Site Security	Perimeter barriers, topographic constraints, or fencing as appropriate
20540	Roads	Design and maintain to minimize dust and tracking of material onto public roads, allow vehicle access and unloading during inclement weather
20550	Sanitary Facilities	Provide adequate number of toilets and handwashing facilities
20560	Drinking Water Supply	Make available safe and adequate drinking water
20570	Communications Facilities	For quick response to emergencies
20580	Lighting	Where operated during darkness, adequate to ensure safety and to monitor effectiveness of operations
20590	Personnel Health and Safety	Wear and use appropriate safety equipment as required by the EA
20610	Training	Required in subjects pertinent to site operation and maintenance; a record of training shall be placed in the operating record
20615	Supervision	Provide adequate supervision of a sufficient number of qualified personnel to ensure proper operation of the site in compliance with all applicable laws, regulations, permit conditions, and other req'ts
20620	Site Attendant	Shall be present during public operating hours, or site shall be inspected by the operator
20630	Confined Unloading	To as small an area as possible to accommodate the number of vehicles using the area without resulting in traffic, personnel, or public safety hazards
20640	Spreading and Compacting	Solid waste shall be spread and compacted in layers with repeated passages of the landfill equipment to landfill equipment to minimize voids within the cell and maximize compaction

20650	Grading of Fill Surfaces	Covered surfaces of the disposal area shall be graded to promote lateral runoff of precipitation and to prevent ponding. Grades shall be established of sufficient slopes to account for future settlement of the fill surface.
20660	Stockpiling	Stockpiled material unsuitable for cover shall be placed so as not to cause problems or interfere with unloading, spreading, compacting, access, safety, drainage, or other operations.
<b>Title 27. Division 2. Chapter 3. Subchapter 4. Article 2. CIWMB - Daily and Intermediate Cover</b>		
20670	Availability of Cover Material	Must provide and demonstrate availability of cover material.
20680	Daily Cover	Minimum of 6 inches of compacted earthen material cover at end of operating day. Earthen material shall include contaminated soil and soil with contaminants other than petroleum hydrocarbons that has been approved for use as landfill daily cover by the RWQCB and other govt agencies. MSWLFs that accept 20 tons or less per day may establish alternative frequencies for daily cover.
20690	Alternative Daily Cover	May be approved if demonstrated that alternative material and thickness control vectors, fires, odors, blowing litter, and scavenging without presenting a threat to human health and the environment. Shall maintain a record of waste-derived alternative daily cover including description of type and quantity of waste. Restrictions on alternative daily cover, including compost, geosynthetic fabric, foam, etc., are given.
20695	Cover Performance Standards	Section provides performance standards to address vectors, fires, and blowing litter.
20700	Intermediate Cover	Compacted earthen material of at least twelve (12) inches shall be placed on all surfaces of the fill where no additional solid waste will be deposited within 180 days to control vectors, fires, odors, blowing litter.
20705	SWRCB-Standards for Daily and Intermediate (Interim) Cover	Shall be designed and constructed to minimize percolation of liquids through wastes; material shall match classification for criteria for wastes that can be discharged to that landfill.
<b>Title 27. Division 2. Chapter 3. Subchapter 4. Article 3. CIWMB - Handling, Equipment, and Maintenance</b>		
20710	Scavenging, Salvaging, and Storage	Scavenging is prohibited at any disposal site Salvaging as approved by the EA shall be conducted in a planned and controlled manner. Salvaged materials generated on site or imported shall be placed for storage in a specific area.
20720	Non-Salvageable Items	Certain materials capable of impairing public health shall not be salvaged unless approved by the EA, etc.
20730	Volume Reduction and Energy Recovery	Volume reduction (incineration, baling, shredding, composting, etc.) may be used where and as approved by the EA.
20740	Equipment	Shall be adequate in type, capacity, and number and sufficiently maintained to permit the site operation to meet requirements of these standards.
20750	Site Maintenance	Operator shall implement a preventative maintenance program to monitor and promptly repair or correct deteriorated or defective conditions with respect to requirements of the CIWMB standards.
<b>Title 27. Division 2. Chapter 3. Subchapter 4. Article 4. CIWMB - Controls</b>		
20760	Nuisance Control	Each disposal site shall be operated so as not to create a public nuisance.
20770	Animal Feeding	Animals may not be fed solid waste. Livestock may graze away from operating areas.
20780	Open Burning and Burning Wastes	Open burning is prohibited. Burning wastes must be deposited safely and extinguished.
20790	Leachate Control	Operator shall ensure that leachate is controlled to prevent contact with the public.
20800	Dust Control	Requires measures to minimize creation of dust and to prevent safety hazards due to obscured visibility.

20810	Vector and Bird Control	Requires control or prevention of the propagation, harborage, or attraction of flies, rodents, or other vectors, and to minimize bird problems.
20820	Drainage and Erosion Control	Drainage system shall be designed and maintained to ensure integrity of roads, structures, and gas monitoring and control systems; prevent safety hazards; and prevent exposure of waste.
20830	Litter Control	Litter shall be controlled, routinely collected, and disposed of properly.
20840	Noise Control	Noise shall be controlled to prevent health and safety hazards to persons using the site and to nearby residents.
20860	Traffic Control	Traffic flow shall be controlled to minimize interference and safety problems with traffic on adjacent public streets or roads, on-site safety hazards, and interference with site operations.
20870	Hazardous Wastes	Requires a program for detecting and disposing of regulated hazardous wastes, inc. PCBs, to include random inspections, records of inspections, training, and notification. A site cannot accept a hazardous waste unless the site has been approved for the particular waste involved.
20880	Medical Waste	Medical waste, unless treated and deemed to be a solid waste, shall not be accepted for disposal at a site.
20890	Dead Animals	Dead animals may be accepted if allowed by local regulations and shall be covered immediately or at a frequency approved by the EA.
20900	Air Criteria	Requires that the units do not violate any applicable requirements developed under a State Implementation Plan (SIP) approved or promulgated by the Administrator, USEPA.
<b>Title 27. Division 2. Chapter 3. Subchapter 4. Article 6. CIWMB - Gas Monitoring and Control at Active and Closed Disposal Sites</b>		
20918	Exemptions	Gives general conditions based on amount, nature, and age of refuse; projected gas generation, remoteness of facility. Requires 5-year review of status.
20919	Gas Control	Requires a monitoring program if the EA, local fire control authority, or CIWMB believes a hazard or nuisance may be created by landfill decomposition gases.
20919.5	Explosive Gases Control	Specifies concentration limits for methane gas and routine methane monitoring program.
20921	Gas Monitoring and Control during Closure and Postclosure	Specifies concentration limits for methane gas and routine methane monitoring program.
20923	Monitoring	Requirements related to design of the gas monitoring network.
20925	Perimeter Monitoring Network	Specifies location, spacing, (<1000 ft), depth (max depth of waste within 1000 ft), well construction, and recordkeeping.
20931	Structure Monitoring	Gas monitoring network shall include provisions for monitoring on-site structures.
20932	Monitored Parameters	Requires monitoring for methane and trace gases if required by the EA.
20933	Monitoring Frequency	Requires minimum of quarterly monitoring; more frequent monitoring may be required.
20934	Reporting	Required within 90 days of sampling; required elements are listed.
20937	Control	Requires steps to protect public health and the environment, notification within 5 days, verification of results, a gas control system.
<b>Title 27. Division 2. Chapter 3. Subchapter 5. Closure and Post-Closure Maintenance. Article 1. General Standards for All Waste Management Units</b>		
20950	SWRCB - General Standards	Requires a final closure plan, final cover to minimize infiltration of water into waste, two permanent survey monuments, vegetation, financial assurance.

<b>Title 27. Division 2. Chapter 3. Subchapter 5. Article 2. Closure and Post-Closure Maintenance Standards for Disposal Sites and Landfills</b>		
21090	SWRCB - Closure and Post-Closure Maintenance Requirements for Solid Waste Landfills	Specifies final cover elements, including no steeper than 1.75:1, minimum 15-foot-wide bench for every 50 ft of vertical height, alternate cover provisions, 2-ft-thick foundation layer, low-hydraulic-conductivity layer, vegetative layer, cover maintenance plan, grading requirements, post-closure duties, final cover surveys, 5-year isosettlement maps.
21100	CIWMB - Scope and Applicability	Describes sites to which the performance standards and minimum substantive requirements for proper closure, postclosure maintenance, and ultimate reuse of disposal sites apply.
21110	CIWMB - Time Frames for Closure	Must begin closure activities within 30 days and complete within 180 days.
21120	CIWMB - Partial Final Closure	Allows for placement of final cover, final grading, drainage control, revegetation, and installation of environmental monitoring and/or control systems consistent with the approved closure and postclosure maintenance plan.
21130	SWRCB - Emergency Response	Requires a written postclosure emergency response plan that describes actions to be taken.
21135	CIWMB - Site Security	Requires signs, newspaper notice, restriction to points of site access.
21337	CIWMB - Structure Removal	Site structures to be dismantled, removed, and disposed of properly, either in the landfill or at another site.
21440	CIWMB - Final Cover	General objectives: control vectors, fire, odor, litter, landfill gas migration.
21442	CIWMB - Final Grading	General requirements, including 5-year iso-settlement maps.
21145	CIWMB - Slope Stability	General requirement to ensure slope integrity under static and dynamic conditions.
21150	CIWMB - Drainage and Erosion Control	General requirement to ensure integrity of postclosure land uses, roads, and structures.
21160	CIWMB - Landfill Gas Control and Leachate Contact	General requirement to implement and maintain gas control and prevent leachate contact.
21170	CIWMB - Recording	File a detailed description of the closed site, including a map, with the Recorder of the County.
21180	CIWMB - Postclosure Maintenance	Requires maintenance and monitoring for a period of not less than 30 years after closure.
21190	CIWMB - Postclosure Land Use	Conditions for construction on top of landfilled areas and within 1000 ft of the disposal area.
21200	CIWMB - Change of Ownership during Closure or Postclosure Maintenance	Requires within 30 days notice to EA of change in title and contact information for new owner.



<b>Title 27. Division 2. Chapter 4. Subchapter 3. Development of Waste Discharge Requirements (WDRs) and Solid Waste Facility Permits. Article 4. SWRCB - Development of Waste Discharge Requirements</b>		
Section	Category	Brief Description
21710	Report of Waste Discharge (ROWD) and Other Reporting Requirements	General information to be provided: waste characteristics, geologic and climatologic characteristics of the Unit and the surrounding region, installed features, operation plans for waste containment, precipitation and drainage controls, and closure and post-closure maintenance plans.
21720	Waste Discharge Requirements	RWQCB shall adopt WDRs that implement the applicable provisions of this title.
21730	Public Participation	Requirements for notification of interested parties, notice; emergency actions are exempt.
21740	Waste Characteristics	Include a list of types, quantities, concentrations of wastes proposed to be discharged at each Unit.
21750	Unit Characteristics and Attributes to Be Described in the ROWD	Information to include potential impairment, support for proposed classification, topography, climatology, geology, engineering and chemical properties, stability analysis, MCE for Class II and MPE for Class III, fault identification and proximity, hydrogeology, land and water use, preliminary closure plan.
21760	Design Report and Operations Plan	Include preliminary and as-built plans, monitoring system plans and rationale, inspection procedures
<b>Title 27. Division 2. Chapter 4. Subchapter 4. Development of Closure/Post-Closure Plans</b>		
21769	SWRCB - Closure and Post-Closure Maintenance Plan Requirements	To include an itemized cost analysis for first 30 years post-closure maintenance, maps, schedule, final treatment procedures, water quality protection as required by SWRCB Resolution No. 93-62, proposed post-closure land use, water balance analysis, water penetration detection method, final cover protection.
21770	CIWMB - Scope and Applicability	CIWMB requirements are additional to RWQCB water protection requirements.
21780	CIWMB - Submittal of Closure and Postclosure Maint. Plans	To be certified by a reg. civil engineer or cert. engr. geologist; to include: updated cost estimates, prelim. closure and postclosure maintenance plans as part of JTD; final plans 2 yr. prior to anticipated date of closure; plans for partial closure req'd 2 yr. before anticipated closure date.
21790	CIWMB - Preliminary Closure Plan Contents	To include a closure cost estimate, location maps, proposed postclosure land uses, est. of closure date, closure activities (security, structure removal, final cover and grading, CQA, gas monitoring, erosion cont)
21800	CIWMB-Final Closure Plan Contents	Includes elements as listed for preliminary closure plan plus detailed schedule for disbursement of funds for closure activities from a trust fund or enterprise fund.
21810	CIWMB - Final Closure Plan Contents for Clean Closure	General requirements for closure plan for solid waste landfills that will be closed by removing solid wastes and contaminated soils.
21820	CIWMB - Closure Cost Estimates	Requirements for cost estimates, to include: most expensive costs, for all activities anticipated for the scheduled closure, contingency of 20% to account for cost overruns; lists elements to be included.
21825	CIWMB - Preliminary Postclosure Maintenance Plan Contents	Purpose is to establish a preliminary estimate for postclosure monitoring, maintenance, and inspection costs; includes a description of planned uses of the property and methods to maintain and monitor.
21830	CIWMB - Final Postclosure Maintenance Plan Contents	To establish a cost estimate and to include emergency response plan, parties responsible for postclosure maintenance, planned property use, monitoring and control systems, o&m plan, reporting.
21840	CIWMB - Postclosure Maintenance Cost Estimates	Annual cost of maintenance and monitoring x 30 years for site security, final cover maintenance, vegetation maintenance, landfill gas monitoring and control, drainage and erosion control systems.

21860	CIWMB - Schedules for Review and Approval for Postclosure Maintenance Plans	30 days for agency to determine completeness , 60 days to complete a plan determined to be incomplete, 120 days for agency to review complete plan, 60 days to prepare a plan if deemed incomplete by the agency, 30 days for CIWMB to receive approval letter from EA and RWQCB, 30 days for CIWMB to approve. May not approve if substantive deficiencies in the plan or in financial mechanisms.
21865	CWIMB - Amendment of Closure and Postclosure Maintenance Plan	Amendments to be submitted if change in operation or landfill design that would affect implementation of closure and/or postclosure maintenance plans, if change in year of closure, change in financial mechanism, updates in cost estimates to reflect changes in foregoing.
21870	CIWMB - Implementation of Closure Plan	Shall adhere to schedules previously specified, shall not begin before closure/postclosure maintenance plan approved. EA and CIWMB shall conduct inspections. On day closure plan begins to be implemented, SWFP is null and void and provisions of the closure and postclosure maintenance plan are enforceable.
21880	CIWMB - Certification of Closure	Requirements for submittal for approval a certification: report by PE or CEG report with supporting documentation, including CQA report.
21890	CIWMB - Revision of Approved Plans for Closure and Postclosure Maintenance	Significant changes to the closure and postclosure maintenance plans must be approved by the CIWMB and the RWQCB, with concurrence from the EA.
21900	CIWMB - Release from Post-closure Maintenance	Operator may be released from postclosure after min. 30-year period upon demonstration and approval that the solid waste landfill no longer poses a threat to the public health and safety and the environment.

<b>State Water Resources Control Board Resolution No. 93-62</b> <b>Policy for Regulation of Discharge of Municipal Solid Waste</b>	
Page	Description
1	<p><b>Whereas:</b></p> <ol style="list-style-type: none"> <li>1. State Water Board and Regional Water Board are the state agencies with primary responsibility for coordination and control of water quality.</li> <li>2. State Water Board is authorized to adopt State Policy for Water Quality Control that may contain "...principles and guidelines deemed essential by the state board for water quality control."</li> <li>3. All State agencies shall comply with State Policy for Water Quality Control regarding any activities that could affect water quality.</li> <li>4. Regional Boards regulate discharges of waste that could affect the quality of waters of the state, including discharges of solid waste to land, through the issuance of waste discharge requirements.</li> <li>5. State Water Board is directed to classify wastes according to threat to water quality and to classify waste disposal sites according to ability to protect water quality.</li> <li>6. The State Water Board promulgated regulations governing discharges of waste to land, including classification criteria for wastes and disposal sites and minimum standards for siting, design, construction, monitoring, and closure of waste management units.</li> <li>7. The federal Solid Waste Disposal Act authorizes development of nationwide standards for disposal sites for MSW, including criteria for sanitary landfills.</li> <li>8. 40 CFR Parts 257 and 258 apply to dischargers who own or operate landfills in California.</li> <li>9. States are required to apply federal MSW regulations subject to approval by the USEPA.</li> <li>10. The permitting authority in an "approved state" may approve engineered alternatives to certain prescriptive standards contained in the federal MSW regulations, provided that the alternative meets specified conditions and performance standards.</li> <li>11. The State Water Board and the IWMB submitted an application for program approval to the USEPA on 2/1/93.</li> <li>12. The USEPA has identified several areas of Chapter 15 that are not adequate to ensure compliance with certain provisions of federal MSW regulations, as summarized in Attachment I.</li> </ol>
2	<ol style="list-style-type: none"> <li>13. Not enough time before 10/9/93, to amend Chapter 15 to ensure complete consistency with federal MSW regulations with EPA approval.</li> <li>14. Composite liners are needed single clay liners will only delay onset of leachate leakage.</li> <li>15. WDRs for many MSW landfills have not been revised to meet the most recent Chapter 15 amendments.</li> <li>16. Adoption of this policy is categorically exempt from CEQA.</li> <li>17. Public notice of the State Water Board's proposal to adopt a State Policy for Water Quality Control regarding Regulation of Discharges of Municipal Solid Waste was conducted in 1993.</li> <li>18. Reference - Water Code Sections 13142, 13160, 13163, 13172.</li> </ol>
	<p><b>Therefore Be It Resolved:</b></p> <p>I. Implementation of the Chapter 15 and federal MSW regulations:</p>

<b>State Water Resources Control Board Resolution No. 93-62</b> <b>Policy for Regulation of Discharge of Municipal Solid Waste</b>	
Page	Description
	<p>A. WDR revision - shall be conducted by each Regional Water Board to comply with Chapter 15 regulations and those applicable provisions of the federal MSW regulations, particularly those stipulated in Section III and identified in Attachment I of this Policy.</p> <p>B. Regional Water Board shall not rely on exemptions or alternatives allowed by Chapter 15 if they would not be allowed under federal MSW regulations, nor shall WDRs be waived for discharge of municipal solid waste at landfills.</p> <p>C. Regional Water Board has the discretion to prescribe less stringent requirements for containment systems and water quality monitoring systems if the containment systems satisfy the performance standard for liners in the federal MSW regulations, the prerequisite for an exemption from groundwater monitoring in the federal MSW regulations is satisfied, and that either of the following two conditions is met:</p> <p>1. There is no aquifer underlying the facility property and it is not reasonably foreseeable that fluids migrating from the landfill could reach an aquifer or surface water body in the groundwater basin within which the landfill is located; or 2. The groundwater in the basin underlying the facility has no beneficial uses and it is not reasonably foreseeable that fluids migrating from the landfill could reach an aquifer or surface water body having beneficial uses.</p>
3	<p>II. Implementation Schedule</p> <p>A. MSW Landfills - 1993-95 deadlines for compliance with all applicable portions of the federal MSW regulations and Chapter 15.</p> <p>B. For proposed MSW landfills, full compliance with Chapter 15 and the federal MSW regulations shall be ensured before discharge of waste to that landfill.</p>
4	<p>III. Containment - New or expanded MSW landfills shall meet the following additional liner and leachate collection system requirements:</p> <p>A. Standards for liners:</p> <p>1. After the Federal deadline, all containment systems shall include a "Prescriptive Design" composite liner that consists of an upper synthetic flexible membrane component (at least 40 mil thick or 60 mils if HDPE, installed in direct and uniform contact with the underlying compacted soil) and a lower component of soil (2 feet thick, <math>k = 1 \times 10^{-7}</math> cm/sec max) or an alternate design that meets criteria for an engineered alternative to the Prescriptive Design.</p> <p>2. New discharges to liners constructed before the federal deadline are allowed if the containment system includes a composite liner that contains a synthetic liner at least 40 mils thick (or at least 60 mils if HDPE) installed in direct and uniform contact with underlying materials and meets performance criteria in 40 CFR 258.40(a)(1) and (c).</p> <p>3. Containment systems installed where an engineering analysis shows that sideslopes are too steep to permit construction of a stable composite liner that meets the prescriptive standards above shall include an alternative liner that meets the performance criteria contained in 40 CFR 258.40(a)(1) and (c) and that is either a composite system with a 40 mil (or 60 mil HDPE) liner or not a composite system with a 60-mil (or 80 mil HDPE) liner.</p> <p>B. Standards for leachate collection:</p>

<b>State Water Resources Control Board Resolution No. 93-62 Policy for Regulation of Discharge of Municipal Solid Waste</b>	
<b>Page</b>	<b>Description</b>
	Include a leachate collection and removal system which conveys to a sump all leachate that reaches the liner and that does not rely on unlined or clay-lined areas for such conveyance.
	Attachment I lists sections of federal MSW regulations that are more stringent than or do not exist in Chapter 15.

<b>State Water Resources Control Board Water Quality Order No. 97-03-DWQ National Pollution Discharge Elimination System (NPDES) General Permit No. CAS000001 (General Permit)</b>	
Page	Description
Fact Sheet	
II. III. IV.	<p>Types of Storm Water Discharges Covered by this General Permit</p> <p>5. Landfills, land application sites, and open dumps that receive industrial waste</p> <p>Inactive or closed landfills, land application sites, and open dumps that have received industrial wastes may be subject to this General Permit unless the storm water discharges from the sites are already regulated by an NPDES permit issued by the appropriate Regional Water Board. Facility operators of closed landfills that are regulated by WDRs may be required to comply with this General Permit. In some cases, it may be appropriate for closed landfills to be covered by the State Water Board's General Permit during closure activities. New landfill construction should be covered by the Construction Activities General Permit. Facility operators should contact their Regional Water Board to determine the appropriate permit coverage.</p>
V.	<p>Types of Storm Water Discharges Not Covered by this General Permit</p> <p>2. Facilities that have NPDES permits containing storm water provisions. When the individual or general NPDES permits for such discharges expire, the State Water Board or the Regional Water Board may authorize coverage under this General Permit or another general NPDES permit, or may issue a new individual NPDES permit consistent with the federal and state storm water regulations. Interested parties may petition the State Water Board or appropriate Regional Water Board to issue individual or General NPDES permits.</p>
VII.	<p>Notification Requirements</p> <p>An NOI must be submitted by the facility operator for each individual facility to obtain coverage. Certification of the NOI signifies that the facility operator intends to comply with the provisions of the General Permit.</p>
VIII.	<p>Description of General Permit Conditions</p> <p><u>Prohibitions</u> - Authorizes storm water and authorized non-storm water discharges from facilities that are required to be covered by a storm water permit. Prohibits discharges of material other than stormwater that are not authorized by the General Permit and discharges containing hazardous substances in storm water in excess of reportable quantities.</p> <p><u>Effluent Limitations</u> - Must meet all applicable provisions of Sections 301 and 402 of the CWA. These provisions require control of pollutant discharges using best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT) to prevent and reduce pollutants and any more stringent controls necessary to meet water quality standards. Must comply with USEPA effluent limitation guidelines in 40 CFR Subchapter N.</p> <p><u>Receiving Water Limitations</u> - Storm water discharges shall not cause or contribute to a violation of an applicable water quality standard.</p>

<b>State Water Resources Control Board Water Quality Order No. 97-03-DWQ National Pollution Discharge Elimination System (NPDES) General Permit No. CAS000001 (General Permit)</b>	
<b>Page</b>	<b>Description</b>
IX.	<u>Storm Water Pollution Prevention Plans (SWPPs)</u> - All facility operators must prepare, retain on site, and implement an SWPPP, emphasizing BMPs. Facility operators must review existing SWPPPs for adequacy with regard to SWPPP requirements in this General Permit. The SWPPP must eliminate unauthorized non-storm water discharges to the facility's storm drain system.
X.	<u>Monitoring Program</u> - Requires development and implementation of a monitoring program. Must visually observe storm water discharges and collect and analyze samples for a required suite (pH, TSS, TOC, specific conductance, toxic chemicals, other pollutants likely to be present in storm water discharges in significant quantities and parameters listed in Table D [Fe for landfills]).
XI.	<u>Alternative Monitoring</u> - Allows development of better, more cost-effective, facility-specific monitoring programs.
XII.	<u>Group Monitoring</u> - Allows individual or group sampling and analysis.
XIII.	<p><u>Retention of Records</u> - All monitoring information, copies of all reports required by this General Permit, and records of all data used to complete the NOI to be retained for a period of 5 years from the date of generation.</p> <p><u>Watershed Management</u> - Allows individual facility operators or groups thereof to propose and participate in watershed management programs in lieu of some or all of the General Permit monitoring requirements.</p> <p><u>Facility Operator Compliance Responsibilities</u> - This General Permit encourages facility operators to develop their own SWPPP and monitoring programs, which include various inspections, reviews, and observations that recognize, encourage, and mandate an iterative self-evaluation process that is necessary to consistently comply with this General Permit. Facility operators have up to 90 days to revise and implement the SWPPP to correct violations.</p>
<b>Waste Discharge Requirements (WDRs) for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities</b>	
2	State Water Board findings:
3	<p>5. If an individual NPDES permit is issued to a facility operator otherwise subject to this General Permit or an alternative NPDES general permit is subsequently adopted which covers storm water discharges and/or authorized non-storm water discharges regulated by this General Permit, the applicability of this General Permit to such discharges is automatically terminated on the effective date of the individual NPDES permit or the date of approval for coverage under the subsequent NPDES general permit.</p> <p>6. Effluent limitations and toxic and effluent standards established in Sections 208(b), 301, 302, 303(d), 304, 306, 307, and 403 of the Federal Clean Water Act, as amended, are applicable to storm water discharges and authorized non-storm water discharges regulated by this General Permit.</p> <p>8. Federal regulations (40 CFR Subchapter N) establish effluent limitations guidelines for storm water discharges from some facilities in ten industrial categories.</p>
4	11. Use BMPs where numeric effluent limitations are infeasible and BMPs meet BAT/BCT and water quality standards.

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<b>Page</b>	<b>Description</b>
5	<p>A. Discharge Prohibitions</p> <ol style="list-style-type: none"> <li>1. Non-stormwater discharges are prohibited; must be eliminated or permitted by a special NPDES permit.</li> <li>2. Stormwater discharges and authorized non-stormwater discharges shall not cause pollution, contamination, or nuisance.</li> </ol>
	<p>B. Effluent Limitations</p> <ol style="list-style-type: none"> <li>1. Stormwater discharges shall meet 40 CFR Subchapter N effluent limitations.</li> <li>2. No hazardous substance equal to or in excess of reportable quantity listed in 40 CFR Part 117 and/or 40 CFR Part 302.</li> <li>3. Must reduce or prevent pollutants in discharges through implementation of BAT for toxic and non-conventional pollutants and BCT for conventional pollutants. Development and implementation of an SWPPP constitutes compliance.</li> </ol>
6	<p>C. Receiving Water Limitations</p> <ol style="list-style-type: none"> <li>2. Discharges shall not cause or contribute to an exceedance of any applicable water quality standards in a SWQCP or Basin Plan.</li> <li>3. A facility operator is not in violation of 2. if BMPs are implemented, reported correctly, and incorporated into the SWPPP.</li> <li>4. Facility operator is in violation of General Permit if report described above is not filed within 60 days after exceedance of water Quality standard, report is not approved by Regional Water Board, SWPPP and monitoring program are not revised as required.</li> </ol> <p>D. Special Conditions</p> <ol style="list-style-type: none"> <li>1. Non-stormwater discharges (incl. groundwater, landscape watering, irrigation drainage) authorized by this General Permit must</li> </ol>
7	<p>comply with Regional Board reqts, local agency ordinances and/or requirements, include BMPs in the SWPPP, not contain significant quantities of pollutants, quarterly visual observations, annual report and description. Regional Board may establish additional monitoring programs.</p>
8	<p>E. Provisions</p> <ol style="list-style-type: none"> <li>1. Must submit an NOI or abbreviated NOI within 45 days of receipt.</li> <li>2. Must implement existing or develop SWPPP in accordance with Section A of this General Permit.</li> <li>3. Must implement or develop Monitoring Program.</li> <li>5. Comply with lawful requirements of municipalities, counties, drainage districts, and other local agencies.</li> </ol>
9	<ol style="list-style-type: none"> <li>9. Request termination of coverage by filing a Notice of Determination and all documentation requested with the Regional Board.</li> </ol>
10	<p>F. Regional Water Board Authorities</p> <ol style="list-style-type: none"> <li>1. Regional Water Boards shall implement the provisions of this General Permit and issue other NPDES permits as appropriate.</li> <li>2. Regional Water Boards may provide guidance on SWPPP, Monitoring Program, and reporting implementation.</li> <li>3. Regional Water Boards may require additional SWPPP and monitoring and reporting activities.</li> </ol>



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	4. Regional Water Boards may approve a single LOI for co-located facilities.
12	<b>SECTION A: STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS</b>  2. Objectives - a) identify and evaluate sources of pollutants that may affect quality of storm water discharges and authorized non-stormwater discharges from the facility; b) identify and implement BMPs to reduce and prevent pollutants. SWPPP requirements are designed to be sufficiently flexible to meet the needs of various facilities. The SWPPP shall contain a compliance activity schedule a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans.  3. Planning and Organization - Identify a stormwater pollution prevention team responsible for developing the SWPPP, assisting the manager in SWPPP implementation and revision, and conducting monitoring program activities required in Section B of this General Permit. Should review all local, state, federal reqts that impact, complement, or are consistent with the reqts of this General Permit, identify existing facility plans that contain storm water pollutant control measures or relate to the requirements of this General Permit.  4. The SWPPP shall include a site maps or multiple site maps. Specific information to be included is listed on page 15.  <b>TABLE A - FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL STORM WATER POLLUTION PREVENTION PLANS - Planning and Organization, Assessment Phase, Best Management Practices Identification Phase, Implementation Phase, Evaluation/Monitoring</b>  5. List of Significant Materials - Locations where the material is stored, received, shipped, and handled, as well as typical quantities and frequency, shall be listed. Include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.  6. Description of Potential Pollutant Sources- Narrative description (guidelines given) for industrial processes, material handling and storage areas, dust and particulate generating activities, significant spills and leaks, non-stormwater discharges, soil erosion.  7. Assessment of Potential Pollutant Sources - Description of industrial activities, potential pollutant sources, and areas of the facility that are likely sources of pollutants to stormwater and authorized non-stormwater discharges.
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	8. Storm Water Best Management Practices - shall be described in the SWPPP, including non-structural BMPs (good housekeeping, preventative maintenance, spill response, material handling and storage, employee training, waste handling/recycling, recordkeeping and internal reporting, erosion control and site stabilization, inspections, quality assurance) and structural BMPs (overhead coverage, retention ponds, control devices, secondary containment structures, treatment)
22	9. Annual Site Compliance Evaluation - shall be conducted in each reporting period (July 1 - June 30), within 8-16 months of each

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23	<p>other, revised as appropriate, and revisions implemented within 90 days of the evaluation. Evaluation to include review of all records, visual inspection of potential pollutant sources for evidence of pollutants entering the drainage system, review and evaluation of all BMPs, and an evaluation report (contents listed).</p> <p>10. SWPPP General Requirements - to be retained on site and made available when requested by the Regional Board; Regional Board may notify facility operator that the SWPPP does not meet one or more of the minimum requirements of this Section; SWPPP shall be revised to reflect changes in industrial activities, shall be revised within 90 days after a facility operator determines that the SWPPP is in violation of any requirement of this General Permit, shall be revised to correct any part that is infeasible.</p>
25	<p><b>SECTION B. MONITORING PROGRAM AND REPORTING REQUIREMENTS</b></p> <p>2. Objectives - a) Ensure that storm water discharges are in compliance with Discharge Prohibitions, Effluent Limitations, and Receiving Water Limitations specified in the General Permit; b) Ensure practices to reduce or prevent pollutants in stormwater discharges and authorized non-stormwater discharges are evaluated and revised to meet changing conditions; c) Aid in implementation and revision of the SWPPP, and d) Measure effectiveness of BMPs to prevent or reduce pollutants in stormwater discharges and authorized non-stormwater discharges. Info needed to develop monitoring program should be in SWPPP.</p>
26	<p>3. Non-storm Water Discharge Visual Observations - Requirements include: visual observation of all drainage areas for the presence of unauthorized non-stormwater discharges and authorized non-stormwater discharges and their sources; visual observations shall be made quarterly, during daylight hours, on days with no stormwater discharges, during scheduled facility operating hours. Quarterly in each of the following periods: Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec, within 6-18 weeks of each other. Document discolorations, stains, odors, floating materials, etc., as well as the source of any discharge. Record dates, locations, observations, responses to eliminate unauthorized non-stormwater discharges and reduce or prevent pollutants from contacting non-stormwater discharges.</p>
27	<p>4. Storm Water Discharge Visual Observations - From one storm event per month during the wet season (Oct 1 - May 30) during the first hour of discharge and at all discharge locations. Visual observations of stored or released stormwater shall occur at the time of release. Required during daylight hours preceded by at least 3 working days without stormwater discharges that occur during scheduled facility operating hours. Document floating and suspended material, oil and grease, discolorations, turbidity, odor, and source of any pollutants. Record dates, locations observed, observations, response taken to reduce or prevent pollutants in stormwater discharges.</p>

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	5. Sampling and Analysis - Collect stormwater samples during the first hour of discharge from (1) the first storm event of the wet season, and (2) at least one other storm event in the wet season. Stored or contained stormwater shall be sampled at the time it is released. Facility operators who do not collect samples from the first storm event shall collect samples from two other storm events of the wet season and explain in the Annual Report why the first storm event was not sampled. Only required during scheduled facility operating hours preceded by at least 3 working days without storm water discharge. Analyze samples for TSS, pH, specific conductance, TOC, O&G (instead of TOC); toxic chemicals and other pollutants likely to be present in significant quantities (may stop analyzing after two consecutive sampling events where they are not detected in significant quantities), other analytical parameters depending on SIC (i.e., Fe for landfills).
29	6. Facilities Subject to Federal Storm Water Effluent Limitation Guidelines - must meet additional requirements for sampling and analysis and calculation or estimate of storm water volume and pollutant mass
	7. Sample Storm Water Discharge Locations - Qualitative requirements for locations, commingled discharges, options for identical discharges and BMPs in two or more drainage areas.
30	8. Visual Observation and Sample Collection Exceptions - dangerous weather conditions, daylight hours only, more than one hour after discharge begins.
	9. Alternative Monitoring Procedures - may be proposed
31	10. Monitoring Methods - Requires explanation of how the facility's monitoring program satisfy the monitoring program objectives, sampling and preservation in accordance with "Standard Methods for the Examination of Water and Wastewater," calibration and maintenance of monitoring instruments in accordance with manufacturers' specifications, laboratory analyses in accordance with 40 CFR Part 136.
	11. Inactive Mining Operations
32	12. Sampling and Analysis Exemptions and Reductions - Gives exemption requirements for No Exposure Certification (all inside work), Regional Water Board Certification Programs, Local Agency Certifications, and sampling and analysis reduction requirements.
35	13. Records - Retain records of following for at least 5 years: date, place, and time of inspections, sampling, visual observations, measurements; individuals who performed the site inspections, sampling, visual observations, and/or measurements; flow measurements or estimates; date and time of analyses, individuals who performed analyses; analytical results, method detection limits, techniques or methods used; QA/QC records and results; non-stormwater discharge inspections and visual observations and stormwater discharge visual observation records; visual observation and sample collection exception records; calibration

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36	<p>and maintenance records of on-site instruments used; exemption and reduction certifications and supporting documentation; corrective actions and follow-up activities.</p> <p>14. Annual Report - Requirements for Annual Report due by July 1 of each year to the Executive Officer of the Regional Water Board responsible for the area in which the facility is located and to the local agency (if requested).</p> <p>15. Group Monitoring - Gives requirements, including a site-specific SWPPP and monitoring program in accordance with the General Permit, a group monitoring plan (GMP), sample collection and analysis, designation of a group leader and responsibilities, and conditions for sampling credits.</p>
40	16. Watershed Monitoring Option - May be approved if found to comply with requirements of General Permit.
42	Table D - Additional Analytical Parameters - Sector L. Landfills and Land Application Sites - TSS and Fe
47	<p><b>SECTION C: STANDARD PROVISIONS</b></p> <p>1. Duty to Comply - Facility operator must comply with all conditions of this General Permit and effluent standards or prohibitions under 307(a) of the CWA</p> <p>2. General Permit Actions - If any toxic effluent standard or prohibition is promulgated under Section 307(a) of the CWA for a toxic pollutant present in the discharge and that standard is more stringent than in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition, and the facility operator so notified.</p> <p>3. Need to Halt or Reduce Activity not a Defense - for not maintaining compliance with conditions of this General Permit</p> <p>4. Duty to Mitigate - Facility operator's duty to prevent any discharge in violation of this General Permit that has a reasonable likelihood of adversely affecting human health or the environment</p>
48	<p>5. Proper Operation and Maintenance - Required to comply with this General Permit and with the SWPPPs</p> <p>6. Property Rights - not conveyed by this General Permit</p> <p>7. Duty to Provide Information - To Regional Water Board, State Water Board, USEPA, or local stormwater management agency</p> <p>8. Inspection and Entry - Allowed to Regional Water Board, State Water Board, USEPA, or local stormwater management agency</p>
49	9. Signatory Requirements
50	10. Certification - Specific language required by people signing under Provision 9
51	11. Reporting Requirements - For planned changes, anticipated noncompliance, compliance schedules, noncompliance reporting.
	12. Oil and Hazardous Substance Liability - General Permit does not relieve from requirements of Section 311 of the CWA.
	13. Severability
	14. Reopener Clause

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	<p>15. Penalties for Violations of General Permit Conditions - Cites relevant portions of the CWA that describe penalties.</p> <p>16. Availability - A copy of this General Permit shall be maintained at the facility and available to appropriate personnel.</p> <p>17. Transfers - This General Permit is not transferable from one facility operator or location to another.</p> <p>18. Continuation of Expired General Permit - Continues in force and effect until a new general permit is issued.</p> <p>19. Penalties for Falsification of Reports - Cites Section 309(c)(4) of the CWA</p>
2	<p>Attachment 1 - FACILITIES COVERED BY THIS GENERAL PERMIT</p> <p>5. Landfills, Land Application Sites, and Open Dumps : Sites that receive or have received industrial waste from any of the facilities covered by this General Permit, sites subject to regulation under Subtitle D of RCRA, and sites that have accepted wastes from construction activities (construction activities include any clearing, grading, or excavation that results in disturbance of five acres or more.)</p> <p>Attachment 2 - Storm Water Contacts for the State and Regional Water Boards - cites a website</p> <p>Attachment 3 - Notice of Intent (NOI) Instructions</p> <p>Attachment 4 - Definitions</p> <p>Attachment 5 - Acronym List</p>

## Disposal Site Inspection Report

Enforcement Agency:

Page of

FACILITY FILE NUMBER	PROGRAM CODE LOCAL = 1 STATE = 5	INSPECTION DATE MM DD YY	TIME IN	INSPECTION TIME
			TIME OUT	
FACILITY NAME			RECEIVED BY (OPERATOR)	
FACILITY LOCATION			OWNER	
INSPECTOR	INSPECTOR SIGNATURE		ALSO PRESENT	
THE ABOVE FACILITY WAS INSPECTED FOR COMPLIANCE WITH APPLICABLE SECTIONS OF DIVISION 38 OF THE PUBLIC RESOURCES CODE (PRC) AND TITLE 27 CALIFORNIA CODE OF REGULATION (CCR).				

THE STANDARDS BELOW ARE CONSIDERED IN COMPLIANCE UNLESS OTHERWISE MARKED WITH ONE OF THE FOLLOWING: V = VIOLATION A = AREA OF CONCERN NA = NOT APPLICABLE

PERMITS	V	A	NA	SPREADING/COMPACTING	V	A	NA	CONTROLS	V	A	NA
PRC 4004 - SIGNIFICANT CHANGE				20640 - SPREADING/COMPACTING				20840 - NOISE CONTROL			
PRC 4014(s) - OPERATOR COMPLIES with TERMS & CONDITIONS OF PERMIT				20660 - GRADING OF FILL SURFACES				20860 - TRAFFIC CONTROL			
21640 - REVIEW OF PERMITS				20660 - STOCKPILING				20870 - HAZARDOUS WASTES			
21600 - REPORT OF DISP SITE INFORMATION				DAILY & INTERMEDIATE COVER				20880 - MEDICAL WASTES			
LOCATION RESTRICTIONS				20670 - AVAILABILITY COVER MATERIAL				20890 - DEAD ANIMALS			
20270 - AIRPORT SAFETY				20680 - DAILY COVER				20900 - AIR CRITERIA			
OPERATING CRITERIA				20685 - PERFORMANCE STANDARDS				GAS MONITORING & CONTROL			
20510 - DISPOSAL SITE RECORDS				20690 - (RESERVED)				20910 - EXEMPTIONS			
20515 - MSWLF UNIT RECORDS				20700 - INTERMEDIATE COVER				20919 - GAS CONTROL			
20517 - DOCUMENT APPROVALS/REQUIREMENTS				20701 - (RESERVED)				20919.5 - EXPLOSIVE GAS CONTROL			
20520 - SIGNS				HANDLING, EQUIPMENT & MAINTENANCE				CLOSURE			
20530 - SITE SECURITY				20710 - SCAVENGING/SALVAGING/STORAGE				21780 - SUBMITTAL CLOSURE PLANS			
20540 - ROADS				20720 - NON-SALVAGEABLE ITEMS				TIRES			
20550 - SANITARY FACILITIES				20730 - VOLUME REDUCTION/ENERGY RECOVERY				17351 - FIRE PREVENTION			
20560 - DRINKING WATER SUPPLY				20740 - EQUIPMENT				17352 - FACILITY ACCESS SECURITY			
20570 - COMMUNICATIONS FACILITIES				20750 - SITE MAINTENANCE				17353 - VECTOR CONTROL			
20580 - LIGHTING				CONTROLS				17354 - STORAGE			
PERSONNEL				20760 - NUISANCE CONTROL				17355 - DISPOSAL			
20590 - PERSONNEL HEALTH & SAFETY				20770 - ANIMAL FEEDING				17356 - INDOOR STORAGE			
20610 - TRAINING				20780 - OPEN BURNING/BURNING WASTES				OTHER			
20615 - SUPERVISION				20790 - LEACHATE CONTROL							
20620 - SITE ATTENDANT				20800 - DUST CONTROL							
CONFIRMED UNLOADING				20810 - VECTOR AND BIRD CONTROL							
20630 - CONFIRMED UNLOADING				20820 - DRAINAGE/EROSION CONTROL							
				20830 - LITTER CONTROL							

COMMENTS (USE SWIS-03 FOR ADDITIONAL SPACE)

## DIRECTIONS FOR FILLING OUT CIWMB-52 FORM

Fill out inspection form completely. Total hours/Time In-Time Out is optional, but recommended. Mark the lines to the right of ~~each law or regulation~~ with one of the following codes:

V = Violation

A = Area of Concern

NA = Not Applicable

All unmarked laws/regulations indicate compliance. Summarize inspection results in the COMMENTS section. If additional space is required, use form SWIS-03. Include explanations for determinations of NA when appropriate. Check form(s) for completeness/accuracy and submit to the California Integrated Waste Management Board (CIWMB) within 30 days of the inspection in accordance with 30 Public Resources Code (PRC) 43218.

### PARTIAL SUMMARY OF APPLICABLE LAWS AND REGULATIONS

**This is only a partial summary.** Consult Title 27, California Code of Regulations (CCR), and the PRC for the complete laws and regulations listed on this form.

**PRC 44014(b)** - The permit shall contain all terms and conditions which the EA determines to be appropriate for the operation of the solid waste facility. The operator shall comply with all terms and conditions of the permit.

#### TITLE 27, CCR

**20270** - New, existing MSWLF and lateral expansions of MSWLF units that are located within 10,000 feet of any airport runway end used by turbojet aircraft or within 5,000 feet of any airport runway end used by only piston-type aircraft must demonstrate that the units are designed and operated to not pose a bird hazard to aircraft. **OPERATING CRITERIA: 20510** - (a) Accurate weight/volume records maintained in a manner and form approved by the EA. (b) Maintain records of excavations. (c) Maintain daily log book. (d) Records of personnel training, and names, addresses and telephone numbers of responsible parties. **20515** - Operator must record pertinent information as it becomes available (location restrictions, inspection records, training procedures, gas monitoring results, closure/postclosure maintenance plans, cost estimates, etc.). **20517** - EA approvals documented in writing to the operator and placed in the operating record. **20520** - (a) ID signs at point of access from public roads. (b) If open to public, entry sign located at primary entrance indicating name of the site operator, telephone number, hours of operation, and wastes either accepted or not accepted. (c) Traffic control measures. (d) Other information as required by EA. **20530** - Adequate perimeter security. Hazardous areas fenced or otherwise secured as determined by the EA. **20540** - Roads within permitted boundary designed to minimize generation of dust and tracking of material onto adjacent public roads. Roads kept in safe condition and maintained such that vehicle access and unloading can be conducted during inclement weather. **20550** - Adequate sanitary facilities available at site or in immediate vicinity. **20560** - Safe and adequate drinking water available.

**20570** - Communication facilities available to site personnel. **20580** - Adequate lighting as approved by EA.

**PERSONNEL: 20590** - Operating and maintenance personnel shall wear and use appropriate safety equipment as required by the EA. **20610** - Personnel adequately trained. **20615** - Adequate supervision of a sufficient number of qualified personnel to ensure proper operations. The operator shall notify the EA and local health agency in writing of the names, addresses, and telephone numbers of the operator or responsible party. A copy kept in the operating record. **20620** - Sites open to the public shall have an attendant present during public operating hours or as determined by the EA. **20630** - Unloading adequately confined. Waste materials deposited at toe of the fill or as otherwise approved by the EA.

**SPREADING & COMPACTING: 20640** - Spreading and compaction accomplished as rapidly as practicable in layers with repeated passages of the landfill equipment. Loose layer not to exceed a depth of two feet before compaction. **20650** - Covered surfaces of the disposal area shall be graded to promote lateral runoff of precipitation and to prevent ponding. Grades shall be established of sufficient slopes to account for future settlement of the fill surface. **20660** - Stockpiling of cover material or native materials unsuitable for cover be placed so as not to interfere with operations.

**DAILY & INTERMEDIATE COVER: 20670** - A sufficient quantity of cover material available. If on-site sources are insufficient, substantiation must be shown to the EA that an adequate supply will be provided. **20680** - (a) Solid waste shall be covered with six inches of compacted earthen material at the end of each operating day or at more frequent intervals if necessary. (b) The EA jointly with the CIWMB may grant a temporary waiver from the requirements of (a). (c) Demonstration of alternative materials may be approved by the EA if requirements are met. (d) Earthen or alternative cover materials shall be placed over all surfaces of disposed solid waste to control vectors, fires, odors, blowing litter and scavenging. **20685** - For use with Alternative Daily Cover sites only. **20700** - Compacted earthen material of at least 12 inches be placed on all surfaces of the fill where no additional solid waste will be deposited within 180 days.

**HANDLING, EQUIPMENT & MAINTENANCE: 20710** - (a) Scavenging prohibited. (b) Salvaging as approved by the EA. (c) Salvaged materials generated on-site placed in specified, clearly identifiable area segregated from the working face. **20720** - Drugs, cosmetics, foods, beverages, etc. shall not be salvaged unless approved by the EA and the local health agency. **20730** - Volume reduction and energy recovery operations as approved by the EA be confined to a specified, clearly identifiable area and does not interfere with operations or create health, safety or environmental problems. **20740** - Equipment shall be adequate in type, capacity and number, and sufficiently maintained. **20750** - Preventative maintenance program to monitor and promptly repair or correct deteriorated or defective conditions. **CONTROLS: 20760** - Disposal site operated and maintained so as not to create a public nuisance. **20770** - Feeding of solid waste to animals which will be used for human consumption prohibited. **20780** - (a) Open burning of solid waste is prohibited. (b) If burning wastes are received, deposit in a safe area and extinguish. If burning wastes have been placed in an active face, immediately excavate, spread and extinguish. **20790** - Leachate controlled to prevent contact with the public. **20800** - Adequate measures to minimize the creation of dust and prevent safety hazards due to obscured visibility. **20810** - Vector and bird control adequate. **20820** - Drainage system designed and maintained to ensure integrity of roads, structures, and gas monitoring and control systems; prevent safety hazards; and prevent exposure of waste. **20830** - Litter control adequate. **20840** - Noise control adequate. **20860** - Traffic control adequate to control interference and safety problems. **20870** - (a) Program implemented for detecting and preventing disposal of regulated hazardous wastes and PCB wastes. Ensure incoming loads do not contain regulated hazardous wastes or PCB wastes. Maintain records of any inspections, staff training, and notification(s) of the EA, etc. if hazardous waste or PCB is discovered at the facility. (b) No acceptance of hazardous waste unless approved. (c) Precautions to eliminate or control dusts, fumes, mists, vapors, or gases. **20880** - Medical waste, unless treated and deemed to be solid waste shall not be accepted for disposal. **20890** - Dead animals accepted if allowed by local regulations and shall be covered immediately or at a frequency approved by the EA. **20900** - MSWLF units may not violate any applicable requirements developed under a State Implementation Plan. **GAS**

**MONITORING & CONTROL: 20918** - Exemptions may be granted if the operator can demonstrate to the satisfaction of the EA that there is no potential for adverse impacts on public health and safety and the environment. **20919** - Landfill decomposition gases shall be monitored and if necessary controlled. **20919.5** - (a) Concentration of methane gas generated by the facility does not exceed 25% of the LEL for methane in facility structures and does not exceed the LEL at the facility property boundary. (b) Routine methane monitoring program implemented. (c) If levels exceeded, necessary steps taken to ensure

protection of human health. (d)(e) Other requirements as stated in Title 27.

**CLOSURE:** **21780** - Closure and postclosure maintenance plans submitted according to this section's schedule and requirements.

**TIRES:** **See Title 14, 17351** - Fire Prevention Measures. **17352** - Facility Access and Security. **17353** - Vector Control. **17354** - Storage of Waste Tires. **17355** - Disposal. **17356** - Indoor Storage.



# **APPENDIX D**

## **Summary of City and County Requirements**

<b>Review of Land Use Permits</b> <b>CIWMB Landfill Compliance Study</b> <b>Project No. WD0335, task 01</b>					
<b>SWIS No.</b>	<b>Site</b>	<b>Permit No.</b>	<b>Issuer</b>	<b>Date</b>	
07-AA-0032	Keller Canyon Landfill	2020-89	Contra Costa Co.Board of Supervisors	1-Nov-94	(amended)
08-AA-0006	Crecent City Landfill	None	Land is zoned for landfill use (public facility - PF) CUP to be issued for closure activities.		
10-AA-0009	American Avenue Disposal Site	2804	Fresno Co. Planning Commission	18-Nov-99	(hearing date)
14-AA-0007	Tecopa Disposal Site	None	Consistent with surrounding land use - zoned OS-40		
19-AA-0853	Sunshine Canyon Sanitary Landfill County Extension	86-312	Co. of Los Angeles Board of Supervisors	21-Oct-93	(hearing date)
31-AA-0560	Eastern Regional Landfill	68-89	Placer County Planning Department	9-Jul-71	
32-AA-0008	Gopher Hill Landfill	1022	US Dept. of Agriculture, Forest Service	28-Jul-83	
39-AA-0015	Forward, Inc. Landfill	UP-91-12	San Joaquin Co.Community Development Dept.	31-Jan-99	(revised)
40-AA-0001	City of Paso Robles Landfill	None			
45-AA-0020	Anderson Landfill	00-24	Shasta Co. Planning Commission		

## Comparison of Land Use Permits

### CIWMB Landfill Compliance Study

	07-AA-0032	10-AA-0009	19-AA-0853	31-AA-0560	32-AA-0008	39-AA-0015	45-AA-0020
Condition	Keller Canyon	American Ave.	Sunshine	Eastern Reg.	Gopher Hill	Forward, Inc.	Anderson
<b>Design Standard</b>	3.1 Meet RWQCB requirements for a Class II site .				26. Must take reasonable precautions to prevent pollution		
<b>Waste Origin</b>	5.1 Within Contra Costa County only.						
<b>Waste Type</b>	6.1-6.4 Wastes approved for RWQCB Class II sites.		10. Class III non-hazardous				
<b>Restricted Waste</b>	6.4 Hazardous, toxic, radioactive, liquid.		10a. Incinerator ash, sludge, radioactive, and medical wastes.		22. Excludes waste that result in substantial harm to fish, wildlife, or human water supply.		35. Shredder waste (unless SWFP is revised) 37. Hazardous waste.
<b>Load Inspection</b>	7.2 Screen for restricted wastes and spot check for covered loads.		26. Must implement load checking program. <b>IB</b> Requires full-time load checker onsite.			A1. Check all documents before permitting entrance	43. Screen TiO <sub>2</sub> loads for radioactivity 45. Develop written load checking program
<b>Waste Flow</b>	9.3 Maximum 3500 tons/day.	B. Maximum 3,600 tons/day	10e. Maximum 6,600 tons/day			1.(1) A. Maximum 6080 tons/day	
<b>Buffer Zone</b>	9.4 Minimum 2000 feet between waste and nearest residence on Jacqueline Drive.		23. Maximum disturbed area specified as a map in Exhibit "A".				34. Minimum 2500-ft zone on the southern property boundary

## Comparison of Land Use Permits

### CIWMB Landfill Compliance Study

	07-AA-0032	10-AA-0009	19-AA-0853	31-AA-0560	32-AA-0008	39-AA-0015	45-AA-0020
Condition	Keller Canyon	American Ave.	Sunshine	Eastern Reg.	Gopher Hill	Forward, Inc.	Anderson
<b>Slope Stability</b>	<b>16.1- 16.12</b> Designed for an MCE with PGA = 0.65g.						
<b>Liner System</b>	<b>17.2-17.3</b> Satisfy RWQCB Class II Requirements, 24" clay overlain by geomembrane.		<b>29.</b> Defers to the RWQCB Requirements and Draft EIR			<b>B8., C4.</b> No liners may be built over the existing landfill without sufficient engineering studies.	
<b>LCRS/Leahcate Management</b>	<b>17.3, 17.10, 17.12, 17.16</b> Double Containment of leachate storage tanks. Must hold 1.5 times the volume in secondary containment. Tanks must be chemically compatible with leachate.						
<b>Groundwater Monitoring</b>	<b>17.5 - 17.7</b> Defers to RWQCB requirements.		<b>30.</b> Defers to RWQCB requirements			<b>2.e.</b> Defers to RWQCB for a approval of plan. <b>B5.</b> Requires monitoring of groundwater elevations within 24 hours of a MMI V earthquake. <b>C5.</b> requires monitoring of domestic wells within 500 feet of the landfill	<b>38.</b> Install 4 lysimeters in Expansion Area A.

## Comparison of Land Use Permits

### CIWMB Landfill Compliance Study

	07-AA-0032	10-AA-0009	19-AA-0853	31-AA-0560	32-AA-0008	39-AA-0015	45-AA-0020
Condition	Keller Canyon	American Ave.	Sunshine	Eastern Reg.	Gopher Hill	Forward, Inc.	Anderson
Surfacewater Control	17.9 Divert surface run-off to limit infiltration.		28. Defers to DPW and RWQCB requirements, requires diversion of surfacewater run-on.			C2. Anchor trenches elevated 2 to 3 feet to limit run-on.	8. Drainage facilities shall be constructed to Shasta County Standards
Surfacewater Protection	18.2 designed for 1,000 yr, 24 hr storm.				22. Locate materials capable of polluting water so as to prevent substantial harm to fish, wildlife, or human water supply.		52. Design for the 100 year, 24 hr storm. 55. Design a contact-water drainage collection pond for Expansion Area A
Erosion/Sediment Control	18.4 Limit grading to April-October, ground cover within 90 days of grading, ditches shall be lined over landfill. Downstream discharge shall not exceed the 25-yr, 24-hr storm.				27. Must provide preventative measures to prevent and control soil erosion and gullyng.	1.1. Temporary plantings, geosynthetics, and erosion control to be constructed as needed. B2. Completed areas to be planted with drought tolerant grasses. C1. Slopes, ridgetops, and peripheral areas shall be revegetated	49. Install drainage ditches, erosion control features, seeding, winter roads and tipping pads, and clean ponds prior to winter season.
Surfacewater Monitoring	18.5 Requires monitoring to be approved by EA, RWQCB, and Community Dev. Dept.					C3. No monitoring required	
Working Face	20.2 Maximum size of 3 acres.	p. B5 Minimize activity areas	18b. Maximum 2 to 3 acres	p3. 50-ft wide trench fill			26. Minimize working area

## Comparison of Land Use Permits

### CIWMB Landfill Compliance Study

	07-AA-0032	10-AA-0009	19-AA-0853	31-AA-0560	32-AA-0008	39-AA-0015	45-AA-0020
Condition	Keller Canyon	American Ave.	Sunshine	Eastern Reg.	Gopher Hill	Forward, Inc.	Anderson
Cover frequency	20.3 Defers to RWQCB requirements.	p. C3 6 in. of daily cover soil		p4. Daily soil cover			
Odor Control	20.2 Defers to BAAQMD requirements						
Dust Control	20.5 Apply water at least twice daily to roads and working face.	p. B3, p. C6 Water, chemical stabilizer or vegetation on disturbed areas and unpaved roads.	18 c.-f. and 18 j. Use of water and sealants for dust control on dirt roads, daily cover, stockpiles and active areas.			1.e. Driveways and maneuvering areas shall be paved. 1.f., D3. Temporary roads (>6 months) shall be chip-sealed. A11. Loads of ash to be covered. D1. Water applied twice daily to active faces and roads.	4. Permanent access roads shall be maintained in a dust-free condition. 26. Minimize working area, compact cover soil, wet soil, and plant grasses to minimize dust.
Air Quality		p. B5 Defers to SJVUAPCD Rules 4642, 2201, and 2520		6. Defers to Placer County APCB. Prohibits burning.	34. Prohibition of burning	5.a. Defers to Rule 2010, 4105, 4651, and 4002 by SJVUAPCD	25. Equipment to be maintained to meet emission standards.
Air Monitoring	20.7, 20.14 Defers to BAAQMD requirements.						27. Verify methane concentrations in on-site structures is less than 1.25% in air. 29. Monitor for suspended particulates at the landfill boundary.

## Comparison of Land Use Permits

### CIWMB Landfill Compliance Study

	07-AA-0032	10-AA-0009	19-AA-0853	31-AA-0560	32-AA-0008	39-AA-0015	45-AA-0020
Condition	Keller Canyon	American Ave.	Sunshine	Eastern Reg.	Gopher Hill	Forward, Inc.	Anderson
Revegetation	20.9, 20.10 Immediate revegetation of completed landfill areas. Plant trees and shrubs downwind of landfill to trap dust.		16. Final fill slopes shall be revegetated. 17. Temporary vegetative cover with compatible species on areas inactive for more than 180 days. 24. Upper ridge to be planted with native tree species.	5. Revegetate all cuts and fills	24, 25. Disturbed areas to be planted with grasses or other suitable vegetation. Plant species to be approved by USFS	1.g., B2., D2. Completed areas to be planted with drought tolerant grasses. C1. Slopes, ridgetops, and peripheral areas shall be revegetated	20., 21., 22., 23. Disturbed areas to be seeded with native species prior to the winter season. Closed areas to be revegetated with oak and pine.
Gas Control and Collection	20.11-20.13 Defers to BAAQMD requirements for gas control, collection system. Requires nonilluminous flare with staged combustion.		34. Defers to SCAQMD requirements.				
Lateral Gas Barriers	20.15 requires barrier or collection area on side slopes.						
Landfill Gas Monitoring	20.17 Test Gas constituents per BAAQMD requirements.						32. Requires installation of perimeter LFG probes.
Access Road	20.21 Primary access road must be paved.	p. B4. Access road must be paved	18g. Access roads to permanent facilities shall be paved.	4. Meet MR-3 road standard with 12-ft lanes and minimum 2:1 side slope cuts and fills.			

## Comparison of Land Use Permits

### CIWMB Landfill Compliance Study

	07-AA-0032	10-AA-0009	19-AA-0853	31-AA-0560	32-AA-0008	39-AA-0015	45-AA-0020
Condition	Keller Canyon	American Ave.	Sunshine	Eastern Reg.	Gopher Hill	Forward, Inc.	Anderson
Speed Limit	20.23 20 mph.	p. B4 15mph on unpaved roads.				1.j., D4. 15 mph	
Biotic Protection	23.1 No net loss of significant habitat, wetland, woodland, or agricultural production.		38. Repair of riparian habitat at a 2:1 ratio for areas disturbed. 43, 46. Replanting of oak trees at a 2:1 ratio and Doug-fir trees at a 5:1 ratio for each tree removed.				
Litter Control	25.1, 25.5, 25.6, 25.7, 25.8 Confine litter to working face. Install litter fences. Daily on-site litter removal. Weekly off-site litter removal.		19a-e. Continuous patrol for onsite litter. Accumulated litter to be removed immediately. Litter fences to be installed.			1.I. Off-site and on-site litter to be collected daily. Litter fence to be provided	65. Collect litter along West Anderson Drive and Cambridge Road at a minimum of once per month.
Closure	33.1 Defers to State law.			p4. Requires 3-ft soil final cover			
Post-Closure Use	33.5 Grazing.						



## Comparison of Land Use Permits

### CIWMB Landfill Compliance Study

	07-AA-0032	10-AA-0009	19-AA-0853	31-AA-0560	32-AA-0008	39-AA-0015	45-AA-0020
Condition	Keller Canyon	American Ave.	Sunshine	Eastern Reg.	Gopher Hill	Forward, Inc.	Anderson
Other / General			8. Requires compliance with all applicable laws, statutes, ordinances, and regulations.		7. Shall comply with all Federal, State, County, and municipal laws, ordinances, or regulations which are applicable. 34. Requires compliance with referenced operation plan (not available) for operations, drainage, construction, compaction, and depth of earth cover.	A7., A8. Provisions and concentration limits regarding aeration of chlorinated hydrocarbon-contaminated soil. D8., D9., D10. Provisions for storage of VOC-contaminated soil and provisions for collection, and removal of excess VOCs.	